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No. XXXVII

SESSION 1936–37

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Papers presented to

PROFESSOR J. L. MYRES

O.B.E., D.LITT., D.SC., F.B.A., F.S.A.

IN HONOUR OF

HIS 70TH BIRTHDAY

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ATHENS AND AEGINA, 510–480 B.C.

At v. 94–5 Herodotus has often been accused of combining into a single war events separated in fact by half a century. At v. 81–9 and vi. 87–93 his critics take a different turn. He here presents us with three wars between Athens and Aegina, one (v. 82–8) in remote antiquity, another (v. 81 and 89) about 505 B.C., and another (vi. 87–93) between 491 and 490: and it is sometimes asserted that he has here split up a single war and scattered its parts over some twenty years, or even over several centuries.

With the earliest war I am not here concerned, except to say that I am not convinced by Wilamowitz's often accepted thesis[1] that the more sober part of the narrative is description of the war of c. 487 rather than real tradition of a much earlier war.[2] The second of Herodotus' wars (v. 81 and 89) has usually been accepted in the main,[3] but Macan[4] wished to transfer it from c. 505 to c. 498, and E. M. Walker[5] has made a determined effort to abolish it altogether, referring Herodotus' narrative to the war of c. 487 and linking it up with the narrative of vi. 87–93: less drastic critics, though they leave the war as a whole intact, have still been inclined to regard the oracle of v. 89 as misplaced.[6] The third war (vi. 87–93) has almost universally been transferred from 491/0 to 488 or 487.

(1) Herodotus v. 81 and 89.

The general considerations which Macan advances, his desire to explain creditably Athens' withdrawal from the Ionic Revolt, and his feeling that Herodotus has left a gap in the account of Athens' relations with Aegina, do not disprove the fighting in c. 505 or compel us to transplant any part of Herodotus' narrative. Walker's more concrete arguments are drawn from points within the story, the sending of the Aiakidai to Thebes (v. 80), the phrase πόλεμον ἀκήρυκτον in v. 81, and the oracle of v. 89. The first, Aegina's response to the original appeal from Thebes, he interprets as a diplomatic refusal to give real help. It may be this,[1] or the Aiakidai may be meant seriously,[2] but even if Walker is right, we cannot conclude that Aegina refused next year, or next month, to send more material aid; Herodotus' sequence is perfectly credible. Πόλεμος ἀκήρυκτος he takes to be a war begun without formal declaration, and he finds the outbreak of such a war in the later seizure of the Athenian theoris (vi. 87). But the phrase commonly means a war in which no heralds pass between the two sides, a truceless war,[3] and if another sense is to be given here it must be given only as the result of our interpretation of this war: or, allowing Walker's translation, there is no great urgency to identify this occasion with the seizure of the theoris unless we are to suppose that Aegina could not surprise the Athenians twice in twenty years.

---

[1] *Aristoteles und Athen* ii, 280 ff.

[2] For this war see Mr. T. J. Dunbabin's article in this volume, 83 ff.

[3] Meyer, *Geschichte des Altertums* III^1. 353, 'dem Kern nach historisch': cf. also Wilamowitz, *loc. cit.*, Busolt, *Griechische Geschichte* II^2. 448, Beloch, *Griechische Geschichte* I^2. 401–2, etc.

[4] *Herodotus IV–VI* ii. 108 ff.

[5] *CAH* iv. 254–9.

[6] Köhler, *Rhein. Mus.* 1891 1 ff., Wilamowitz, p. 281, Macan, p. 109, Walker, pp. 258–9, Meyer, *loc. cit.*, Busolt II^2, 644 n. 3, Beloch II^2, 25 n. 3.

The oracle is a more serious matter, and deserves quotation in full: καὶ Ἀθηναίοισι ὁρμημένοισι ἐπ' Αἰγινήτας στρατεύεσθαι ἦλθε μαντήιον ἐκ Δελφῶν ἐπισχόντας ἀπὸ τοῦ Αἰγινητέων ἀδικίου τριήκοντα ἔτεα, τῷ ἑνὶ καὶ τριηκοστῷ Αἰακῷ τέμενος ἀποδέξαντας ἄρχεσθαι τοῦ πρὸς Αἰγινήτας πολέμου, καί σφι χωρήσειν τὰ βούλονται· ἢν δὲ αὐτίκα ἐπιστρατεύωνται, πολλὰ μὲν ἐν τῷ μεταξὺ τοῦ χρόνου πείσεσθαι, πολλὰ δὲ καὶ ποιήσειν, τέλος μέντοι καταστρέψεσθαι. The Athenians could not endure the delay, but built at once their precinct for Aiakos[4] and made their preparations against Aegina; these, however, were stopped by the news of Cleomenes' plan to restore Hippias. It is thus the second part of the oracle that is fulfilled, but the exact figure of thirty years in the first part is surprising, and gives rise to the suspicion that this at least is *vaticinium post eventum.*

This sets the problem, in what sense the thirty years are concerned in the fulfilment of the oracle. The assumption which must underlie the usual treatment of this problem is that the period of trouble foreseen in the second part of the oracle is of equal length with the thirty years of peace offered to Athens in the first part: so the thirty years run in either case from the original date of the oracle to the final conquest of Aegina in 457, and the oracle was originally given c. 487.

But though the phrase ἐν τῷ μεταξὺ τοῦ χρόνου might mean, within the period already defined as thirty years, it need not,[5] and the words τέλος μέντοι suggest to me that the god intended for Athens not an equal but a longer period of trouble as the penalty for disobeying his instructions. Further, of the years 487–458 very few are available for the vicissitudes prophesied in the part of the oracle that was fulfilled. From 481 to 458 we know of no fighting between Athens and Aegina. Before that comes the war for which Themistocles built his ships, but though Herodotus' language [1] leaves us no doubt that this war in some sense existed, he makes no reference to actual fighting, and expressly says (vii. 144) that Themistocles' ships were never used for the purpose for which they were built.[2] The war of vi. 87–93 may as well have ended as begun in 487, and it is possible, even probable, that 487 saw the last serious battle before 458. But if the thirty years are roughly speaking years of peace, this suggests a different interpretation of the oracle: when the struggle was resumed in 458 the devout might claim that Athens had, though late, in some sense kept the god's instructions to hold back for thirty years, and thus had earned his favour. The second part of the oracle was easy of interpretation: in the period 504–487 Athens had fought probably two wars,[3] possibly three,[4] and their success had varied as the oracle had promised.

---

[1] There is perhaps an earlier instance in Diod. viii. fr. 32.

[2] Some trouble was taken to gain their aid at Salamis (Her. viii, 64 ff.).

[3] This sense is certain in Xen. *Anab.* iii. iii. 5, Dem. xviii. 262 etc. Plato, *Laws* 626a could be taken either way, but I know of no passage where it certainly bears the meaning 'an undeclared war,' and would prefer to give it here its normal meaning.

[4] Wilamowitz attributes the precinct to 458: but this makes it almost impossible to explain Herodotus' account, and surely Herodotus would know if a precinct had been dedicated in 458.

[5] Indeed, it could not to Herodotus or to anyone who dated the oracle to c. 504, if they gave a moment's thought to the matter.

On this view the oracle may stay where Herodotus puts it,[5] and with the oracle goes the war of v. 81 and 89. Of remaining criticisms, we can hardly allow that Herodotus has given this war no distinguishing details,[6] for he says that when the Aeginetans attacked the Attic coast the Athenians were occupied with the Boeotians, and it has not yet been suggested that Athens and Thebes were at war in 488 or 487. More serious is the charge that Herodotus puts no proper end to the war, that when the congress of the Peloponnesian league rejected Sparta's plan, Athens was at liberty to proceed with her attack.[7] But the congress came to its decision against Sparta's wish, and apparently on the ground that it was unjust to restore a tyrant; if Athens proceeded to attack a member of the league, the league might presently feel less tender of Athenian liberty. Herodotus' reason is near to being a reason: or if it is none, we may complain that he has left the war unfinished, but cannot on this ground alone say that it never in fact began.

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[1] vii. 144, οὗτος γὰρ ὁ πόλεμος συστάς: vii. 145, τοὺς κατ' ἀλλήλους ἐόντας πολέμους· ἦσαν δὲ πρός τινας καὶ ἄλλους ἐγκεκρημένοι, ὁ δὲ ὦν μέγιστος Ἀθηναίοισί τε καὶ Αἰγινήτῃσι: cf. Thuc. i. 14 Αἰγινήταις πολεμοῦντας. Professor J. Enoch Powell's 'rage' (*Lexicon to Herodotus*, συνίστημι 5) seems rather highly coloured for συνίσταμαι.

[2] I imagine that they were in fact decreed in the archon-year 483/2 and built in 482/1 with the intention of fighting in 481, but that this intention was frustrated by the conference of reconciliation (Her. vii. 145).

[3] See below, pp. 4 ff.

[4] Macan's hypothesis of a war in 498 is not destroyed by the objections made above to transplanting the war of c. 505.

[5] I believe it to be mainly *ante eventum*, though the figure thirty will be interpretation *post eventum* (cf. Walker, p. 258). For an oracle wholly *post eventum* (Wilamowitz and Macan) it is very involved. The alternative form suggests that it was designed to influence policy, and R. L. Beaumont pointed out to me that it appears to come to Athens of its own accord without consultation, an unusual detail which may be genuine and if genuine is decisive.

[6] Walker p. 256.

[7] *Ibid.*; cf. Wilamowitz pp. 280–1 and succeeding note.

(2) HERODOTUS vi. 87–93.

So far, we can believe most that Herodotus has written. At vi. 87–93 this is no longer possible. The connecting formula at the head of vi. 94 must mean that the series of events ending in the Aeginetan war was over before Marathon,[1] and this is an intolerable compression: even Cleomenes' death falls almost certainly after 490, and the ground for Sparta's changed attitude to Aegina is not that Cleomenes was discredited, but that the Persian danger had for the time receded.

The war that follows Cleomenes' death is later than Marathon. But given this rearrangment, we have still a problem in Herodotus' displacement of the facts,[2] another in Thucydides' use of the phrase Αἰγινητῶν μὲν ἐπικράτησιν (i. 41) to describe the result of Corinth's loan of twenty ships to Athens (Her. vi. 89), and another in the fact that a thousand Argive volunteers were available to help Aegina (vi. 92) apparently some six or seven years after Sepeia. As a contribution to the solution of these problems I suggest that the whole passage vi. 88–92 (Nikodromos' plot, the arrival of the volunteers and the battle in which they mostly perished) belongs in reality to a war fought about 493.

There is no great difficulty in detaching this passage. It is notorious how little it is connected with what follows: we leave the Athenians in vi. 92 apparently victorious by land on Aegina, in vi. 93 we find them at sea with no intervening explanation of the shift of scene or of the disorder which then causes their defeat.[3] At the other end there is connection. It is primarily a connection by motive—the Athenian attack was meant to avenge the seizure of the theoris—and as such, easy to construct: if the Nikodromos episode is an insertion, there is here a natural place and manner of insertion and the patch will show only at the lower end.[4]

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[1] Wilamowitz appears, however, to believe that Herodotus is regularly guilty of stylistic transitions which are historically meaningless.

[2] I think it is this that needs explanation rather than the misapprehension of motive, that is, I do not imagine that he begins with the misconceived motive and then arranges the facts round it. In general he relates fact (though he is not always merely credulous of his sources) and speculates on motive, and his attribution of motive is often, as here, affected by his preference for what is personal and easily digested—the main root of his alleged *malignitas*.

[3] Wilamowitz fills this gap from v. 86, finding there the real issue of the Argive intervention which has been perverted in vi. 92 by Athenian patriotism and the ἀριστεῖα of Sophanes of Decelea.

[4] Compare the structure of v. 94–5, where the intrusive stories of the earlier war form similarly a closed unit (v. 95). The connections, πολεμεόντων δέ σφεων παντοῖα καὶ ἄλλα ἐγένετο and Σίγειον μέν νυν οὕτω ἐγένετο ὑπ' Ἀθηναίοισι, are not closely-woven narrative connections, and little damage is done to Herodotus by supposing them false.

On the positive side, Thucydides' language seems to call for a war won by Athens rather than a single battle. It is true that ἐπικρατέω is frequently used of victory in a single battle,[1] though mostly in continuous narrative and I think always with obvious reference, implicit or explicit, to the battle in question: it is also true that the Corinthian speaker has every reason to exaggerate the benefit conferred by Corinth. But the speaker must reckon with the knowledge of his audience, and παρέσχεν ὑμῖν Αἰγινητῶν μὲν ἐπικράτησιν, standing as it does without qualification, is so sweeping as to be an abuse of language[2] if it refers only to a single Athenian victory in 487, cancelled at once by the Athenian defeat of vi. 93 and part of a war which Aegina won. This suggests that the loan of ships belongs to a separate war in which Athens was victorious: but Thucydides' note of time, ὑπὲρ τὰ Μηδικά, is not enough to provide a certain date.

The Argive volunteers were led by an athlete and were probably aristocrats, who wished to escape the domination of the slaves at Argos (Her. vi. 83): the State itself—that is, its slave rulers—had refused help to Aegina (vi. 92). These volunteers have for long been the only serious embarrassment of those who submit to the weight of evidence and place the battle of Sepeia in 494: by 487 the process of Argive recovery had had time to make an appreciable beginning and the aristocrats ought rather to wait, and work, for the counter-revolution than thus recklessly to waste their returning strength. But if the war in question belongs to c. 493, it is easier to understand them. Immediately after the revolution members of the defeated aristocracy might well despair of the position at home and take the opportunity of service abroad in aid of an old ally.

At the time of Nikodromos' plot the Athenians had fifty ships and needed Corinth's twenty to make their numbers up to seventy. In 489 (Her. vi. 132 ff.) Miltiades obtained seventy ships from the Athenians for his expedition to Paros. Either, then, the Attic fleet has lost twenty ships between 489 and 487, or it has gained twenty ships between 493 and 489. We can account for the decrease by supposing that twenty ships had gone out of commission,[3] or for the increase by connecting it with the naval activity of Themistocles' archonship (Thuc. i. 93): the latter seems to me slightly the more probable.

That the passage vi. 88–92 should refer to a war fought before Marathon is not an immediate or a complete solution of the problem set by Herodotus' confusion. But it is possible, for instance, that he or his source may have known that the settlement of Nikodromos at Sunium (or the intervention of the Argive volunteers) belonged to the period before Marathon, and thus that the effect of combining the war of 493 with the war of 487 was to date the combination before 490 for the sake of Nikodromos, but after 491 because the seizure of the theoris was a reprisal for Athens' retention of the hostages taken by Cleomenes from Aegina. Such chronological compression troubles Herodotus no more than distortion of motive.

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[1] Intransitively, Thuc. i. 49, iv. 73 etc. (cf. vi. 88), hardly differing from νικάω: with the genitive Thuc. i. 30, ii. 93, viii. 48 etc., meaning 'gain control of', or 'get the better of': for Herodotus cf. Powell, *op. cit.* s.v.

[2] The language is, after all, Thucydides', however Corinthian the sentiments.

[3] Conon in 407 reduced the Athenian fleet from over 100 to 70 (Xen. Hell. i. v. 20): in 435 the Corcyreans, by a special effort, raise 120 ships (Thuc. i. 29), in 433 they man 110 (i. 47).

This rearrangement of vi. 87–93 is put forward tentatively: the evidence is far from decisive, and my attempt may well go the way of other attempts to clear up the confusion of the Aeginetan wars. But before I leave it, I should like to point out that it fits very well with what we know of Athenian politics in the period. The successful war of 493 is to be connected [1] with that recovery of Athenian confidence shown in Themistocles' archonship, in the acquittal of Miltiades and in his election to the generalship. The war lost in 487 was fought in a period of democratic revival,[2] so presumably under the auspices of Xanthippus, and its failure may contribute to his ostracism in the spring of 486.[3] The return of Athens to thoughts of aggression is, as one might expect, associated with the name of Themistocles.

The chronology advocated in this essay may be summarised as follows:—

1. Not earlier than 506 begins the series of events described in Herodotus v. 74–81 and 89–93. This series includes the sending of the Aiakidai to Thebes, the πόλεμος ἀκήρυκτος and the oracle of v. 89, and is over before the Ionic Revolt.

2. In 499 comes the Ionic Revolt. [This was possibly followed by an Aeginetan war: if so, nothing is known even of its issue, but a defeat would help to explain Athens' behaviour in the next few years.]

3. To 494 belongs the battle of Sepeia, followed shortly by the slave revolution in Argos. In 493 Athens, recovering confidence, fought with some success the war of Nikodromos: the victory is not, of course, complete to the taking of the city, and all that can be done for Nikodromos ultimately is to settle him at Sunium. The Aeginetan submission to Darius in 491 may be partly attributable to this defeat.

4. An effect of Marathon in 490 and of Cleomenes' death (? 489 or 488) is to alter Sparta's attitude to Athens and Aegina. About 487 [4]

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[1] As cause, effect or coincidence.

[2] Arist. Ἀθ. πολ. xxii. 3, θαρροῦντος ἤδη τοῦ δήμου and xxii. 5.

[3] *Ibid.* xxii. 6.

[4] If the expenditure on a trireme for Sunium in Lysias xxi. 5 could be reckoned to the expenses of the archonship of Eukleides (xxi. 4), we might have a secure date for the Sunium πεντετηρίς. But xxi. 5 has very much the appearance of a supplementary list of minor expenses not charged to any particular year.

Aegina seized the theoris, and the prisoners were presumably exchanged for the hostages held by Athens since 491. Athens attempted a reprisal, but was defeated.

5. In 482 war began again and Athens built ships for the purpose: but before a decision could be reached this war was stopped by the conference of reconciliation in 481.

A. ANDREWES.

NEW EVIDENCE FOR DATING THE SETTLEMENTS AT TROY

Since Schliemann's earliest excavations almost seventy years ago the problem of dating the successive layers of remains at Troy has constantly engaged the serious attention of the interested archaeological world. At first it was hardly more than a subject for speculation, since in the early 'seventies' little comparative material was available from other sites and the internal evidence was insufficient for safe chronological conclusions. Schliemann himself thought that the 'burnt layer,' first called Troy III, and later equated with the final phase of Troy II, represented the ruins of the citadel of Priam; but his discovery in 1890, at a much higher level in a stratum of Troy VI, of considerable numbers of Mycenaean potsherds made a revision of this dating imperative. It was, however, left to Professor Dörpfeld, after Schliemann's death, to ascertain definitely in two further campaigns of excavation, in 1893 and 1894, that the Sixth and the Seventh layers were those of settlements coeval with the Mycenaean Age, and that they could therefore safely be assigned to the second half of the second millenium B.C. Professor Dörpfeld also put forward the view, which met with general acceptance, that Troy VI was the Homeric stronghold besieged and captured by the Achaeans under the leadership of their sovereign Agamemnon.

For the deeper layers no trustworthy chronological values were found; consequently Professor Dörpfeld and his collaborators, considering the depth of the deposit and the character of the surviving remains in each stratum, were obliged to make an estimate on the basis of general probabilities. In accordance with their conclusions, set forth with admirable caution and reserve, Troy I was attributed to the first half of the third millennium, from *ca.* 3000 to 2500 B.C.; Troy II to the second half of the same millennium, 2500 to 2000 B.C.; Troy III, IV, and V to the ensuing five hundred years, 2000 to 1500 B.C. Troy VI was dated from 1500 to 1000 B.C. (later revised to 1200); Troy VIIa and b from 1000 (later 1200) to 700 B.C.; Troy VIII from 700 B.C. to the end of the pre-Christian era; and Troy IX from the turn of the era to *ca.* 500 A.D. (*Troja und Ilion*, I, 31).

In spite of various modifications proposed from time to time, the conservative dating thus provisionally fixed has pretty well held its ground until our own day, adopted by Montelius, Schuchhardt (eventually) and others, followed essentially by Fimmen, Bittel, the *Cambridge Ancient History* and similar standard works. The need for re-examining and verifying the evidence and for establishing more securely the framework of Trojan chronology has, however, grown with the years, and the matter is by no means a mere academic question. For little by little, as apparent similarities and supposed synchronisms have been pointed out, the Trojan system of dating has been made to serve as a cornerstone for the construction of a chronology for early European prehistory.

As a cornerstone, however, it suffered from at least one serious weakness which has always troubled those who built upon it, and has caused them no little uneasiness as to the soundness of their structure. For in the whole of the Trojan sequence only a single phase of contact with the Aegean world was known by which reasonably sure absolute dating could be attained. The reference is of course to Professor Dörpfeld's discovery of imported Late Mycenaean pottery in layers VI and VIIa, as already mentioned. The exact relations of these sherds to the stratigraphy of the layers themselves was not fully determined; and the only conclusion that could safely be drawn was that Troy VI and VIIa were in part, at least, contemporary with the later Mycenaean Age. The earlier Trojan periods, antedating the middle of the second millennium B.C. and regarded as of chief importance for their possible bearing on problems of European chronology, were thus left suspended rather precariously, with no visible means of support.

In their treatment of this problem two opposing schools of thought have endeavoured to find a satisfactory solution—a solution, that is (as must be admitted in many cases), agreeing more or less closely with previously formed chronological views for other areas. On the one hand were the advocates of what may be called the higher dating, who believed that the beginnings of the Trojan settlement should be ascribed to the first half of the third millennium, if not indeed earlier; on the other hand were those who argued for a low dating because they felt it necessary to compress the early periods of Troy into a much shorter space of time. Among the adherents of the former school it may suffice to mention H. Frankfort, who, approaching from the Mesopotamian side, has recently proposed to push Troy I back into the fourth millennium (*Archaeology and the Sumerian Problem*). To the late school belongs V. G. Childe, who sought to bring Troy I down to 2400 B.C. and the end of Troy II to 1800 (*Dawn of European Civilization*); but a more recent and more extreme representative is N. C. Aaberg, who, following in the footsteps of P. Reinecke and E. Reisinger, but outdoing them, has boldly ventured to lop off more than a thousand years of Trojan chronology, placing Troy I in the century from 1700 to 1600 B.C., and making Troy II, from 1600 to 1450 B.C., contemporary with the Shaft Graves at Mycenae. In his chronological table,[1] so far as one can tell, Settlements III, IV and

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[1] Aaberg, *Bronzezeitliche und Früheisenzeitliche Chronologie*, III, p. 101 f.

V, in spite of their imposing mass of gradually accumulated debris, surpassing 6 m. in depth, are completely ignored; and one cannot help feeling that, with better reason, a similar fate awaits Mr. Aaberg's ill-starred dating itself.

The new excavations at Troy, conducted annually from 1932 to 1938 by the archaeological expedition of the University of Cincinnati, have brought to light a considerable body of fresh evidence for the chronology of the site. Significant additional contacts with contemporary Aegean civilizations have been revealed, and, although the exact dating of the initial phases of occupation at Troy is still shrouded in obscurity, a series of synchronisms has been established with the early, middle and late stages of the Aegean Bronze Age. It may be said at once that our new evidence has amply substantiated the higher dating.

Early Helladic ware, mainly of the *urfirnis* type, has been found in considerable abundance in the deeper layers of the mound. It first makes its appearance in the upper strata of Troy I, that is, toward the end of the period of the First Settlement. It is common in Troy II, III and IV, and it still occurs, though more rarely, in Troy V. The material consists for the most part of potsherds, more than 700 of which have been recorded in our inventory; many are unquestionably from imported vessels, while others seem to represent local imitations or adaptations of the ware. Among the imported pieces some are to me indistinguishable from the Early Helladic ware of north-eastern Peloponnesos, though the majority look as if they may come from some other region—perhaps from Central Greece. There is only a single example of Patterned ware.

The discovery of so great a quantity of Early Helladic pottery makes it clear that all the settlements at Troy from I to V must fall within the period of the Early Bronze Age in the Aegean. The earliest imported examples we have, namely those from the later phases of Troy I, are obviously not of the most archaic types of Early Helladic ware known on the mainland of Greece, but must presumably rather be attributed to an intermediate stage of the Early Bronze Age.

With the beginning of the Sixth Settlement we definitely enter a new epoch, the Middle Bronze Age. The pottery of the initial phases of Troy VI is for the most part pure Minyan ware, in which grey, yellow and red varieties occur side by side, and the most characteristic form is that of a small fruit-stand, or heavy goblet, on a broad ringed stem. This ware is virtually identical with the Minyan ware of the Greek mainland from which it can be distinguished, if at all, only by the peculiarities of local clay and manufacture.

In layers belonging to somewhat later and intermediate phases of the Sixth Settlement were found a few sherds—some twenty altogether—of imported Mattpainted ware, including two or three examples of the polychrome variety so well represented in the Sixth Shaft Grave at Mycenae. The earliest imported Mycenaean ware, rather scanty, but unmistakably of mainland style and datable to Late Helladic I, comes from the same general context; while the ‘ Palace Style ’ of Late Helladic II is abundantly exemplified in deposits laid down during one of the later stages of the Sixth Settlement. The final phase of Troy VI, which was brought to its end by a severe earthquake, has yielded a mass of imported Mycenaean pottery as well as local imitations, together with many fragments of genuine Cypriote ‘ milk-bowls ’; and this was certainly a period of intensive and flourishing external relations. The bulk of the imported ware, both Cypriote and Mycenaean, can safely be ascribed to the early fourteenth century B.C., and the latest elements, so far as I am able to judge, do not descend beyond the second half of that century. It is thus evident that the seismic disturbance which so seriously damaged the walls and houses of the Sixth Settlement must have occurred at some time in the years before 1300 B.C.

Subsequent to the disaster foreign relations seem to have been considerably restricted; imported Mycenaean and Cypriote pottery, at any rate, becomes relatively scarce in period VIIa, although a local painted style, imitating the Mycenaean, attains a certain vogue, and some characteristic Late Mycenaean vessels, such as the tall three-handled jar and the two-handled crater-bowl, were freely copied in local plain ware. The speedy destruction of this Settlement in a great conflagration left little time, however, for much artistic, cultural and political development. The date of the catastrophe can be approximately fixed to a time not far from 1200 B.C.; for, corroborating the evidence already mentioned, we note that at the beginning of the succeeding period, designated by Professor Dörpfeld as Troy VIIb, some imported Mycenaean pottery still occurs, and it is of the so-called ‘ Granary Style,’ which was in use at Mycenae during the twelfth century.

The sudden appearance of *Buckelkeramik* at Troy now indicates an abrupt change in foreign contacts; and the eleventh and tenth centuries surely represent a long period of slow fusion of an intrusive European element with the surviving native Trojan. With the completion of this process, in which the native Trojan element seems ultimately to have triumphed, we reach the Eighth Settlement during the life of which, passing through a Geometric and an Orientalising phase, and falling gradually more and more under Greek influence, Troy finally becomes thoroughly Hellenised.

The Classical Period itself is scantily represented at the site which may indeed now for a time have been unoccupied by habitations; but the advent of the Hellenistic Age heralds a new era of prosperity and expansion, which, departing slightly from Professor Dörpfeld’s system of division, we propose to call Troy IX. The citadel is transformed into a great sanctuary of Athena and the town spreads widely over the adjacent plateau. Entirely rebuilt and refortified in the second half of the fourth century, Ilion now becomes a Hellenistic city; and, with no apparent break in its cultural continuity, though suffering not a little from the political vicissitudes of Graeco-Roman times, and obliged at least once to carry out an almost complete reconstruction of its public buildings, it maintains an uninterrupted existence down to the fifth century A.D.

The new chronological evidence briefly summarised in the foregoing paragraphs is still being studied in detail; but pending the final publication of a comprehensive report on our excavations, the preparation of which is likely to require considerable further time, it may not seem premature if I take the opportunity here to set forth the results, provisionally, in tabular form. In transposing (for the sake of simplicity) our relative chronology into absolute terms I am following the dating generally accepted among archaeologists for the successive periods of the Bronze Age on the Greek mainland the soundness of which need not be discussed in this paper. It should of course be borne in mind that the dates suggested are for the most part only approximate and that the margin of error, especially for the early periods, may be considerable. With these reservations I venture accordingly to offer, subject to later correction in detail, the following table which represents our current views on the dating of the Trojan settlements.

Troy	I	3200–2600 B.C.
	II	2600–2300
	III	2300–2200
	IV	2200–2050
	V	2050–1900
	VI	1900–1300
	VIIa	1300–1200
	VIIb	1200–900
	VIIIa	900–550
	VIIIb	550–350
	IX	350–400 A.D.

CARL W. BLEGEN.

THE VIKINGS OF THE MEDITERRANEAN AND THE VIKINGS OF THE NORTH[1]

PROPERLY speaking, these are only a few thoughts arising from this wonderful voyage into history and life I am anxious to put before you. Perhaps more effectively than it would have been in a more ordinary way, we have been faced on this journey by this boat with one great and important fact about the history of the Greeks: the most intimate and closest possible connection of Greek civilisation with the Greek Sea, the Mediterranean in the widest sense of the word. First and last it is the boat, the sailing-boat, that is the very foundation of all the culture in Greece. In these last few days we have seen all the islands rearing themselves from the sea, creating large isolated unities, independent geographical territories. Every one of them, where populated, simply postulates the boat as a means of intercourse. The boat it is that has been linking them together—which created a Greece in ancient times as well as in modern. And one thing more: most of the islands have difficult landing-places. There are no skerries, no small islands or islets which could shelter the coast. From this also follows the necessity of shaping strong, sea-going boats, as the ocean itself creates hard conditions.

In a nutshell, then, I think we have here the very history of Greece, its possibilities and its chances, the explanation of many of its great results, its psychological and sociological realities. To one of those I will point here. Earlier than many other people whose history and archaeology we know, the pre-Greek peoples and the Greeks leave developed navigation and shipping. They become discoverers and colonists—settlers. And one of the most conspicuous fruits of this work was just the Greek colonies, a splendid expression of an age in Greek history which in many respects reminds me of the Viking Age in the North.

It lasted for nearly three hundred years, and its greatest aspect is not merely its fantastic dimensions, its expansive powers and its civilising work, but, much more, the important fact that it became the very foundation of the later development of culture in the Mediterranean. It spread from the innermost part of the Black Sea in the east to Southern Spain in the west; it expressed itself highly qualified in Sicily, in Southern Italy, the *Graecia Magna*, in Asia Minor, and round the shores of the Black Sea.

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[1] When on board the *Cairo City* during an Easter cruise, 1939, some very good friends of mine persuaded me to give a talk from my own field of work. Although away from my tools, I ventured to speak, choosing as my subject the title above. When the Committee of the British School at Athens subsequently wrote to me and gave me the honourable task of contributing to Myres' commemorative publication, it kindly allowed me, at my request, to publish this brief improvised contribution, in homage to my very highly admired old friend J. L. Myres. It appears here precisely as it was given on board the *Cairo City*.

Now, one of my main points in this brief review here is the well-known fact that these colonies were not at all politically or imperially connected with Greece. As one has expressed it, the Greek colonies lost their nationality by degrees and, in the west, Rome became the executioner of the Greeks. But that is to put it the wrong way round. The Roman civilisation became Greek from the very moment the Greek colonies became subject to Rome. Greece was the real conqueror of Rome.

In fact, the Greek colonies were the pioneers of Greek civilisation. And it is sufficient to mention the fact of the great work of the colonists themselves in Greek life. Greek philosophy would not have existed without the Eleatics, Xenophanes, Parmenides and Zenon—nor Greek religion and science without Pythagoras, Empedocles and Archimedes, all of them originating from the colonies in the west.

The foundation of all this work is to be found in the age which I named the Greek Viking Age, in its navigation and its shipping. I would believe that this navigation has had a much wider scope than generally understood, because history has forgotten it, and because Greek civilisation in later centuries had itself forgotten, when the great expansion was over, and the Greek-Hellenistic geography has lost its ocean-wide horizon and enclosed itself within the view of a land-crab. This is the typical fate of a Viking Age mentality, and it is just what happens in the case of our Northern Vikings, of whom I am soon to speak.

In a presidential address delivered to the Second Congress of International Prehistory (in Oslo, 1936) I endeavoured to prove that Greek and Mediterranean navigation had not at all stopped at Gibraltar——they had in, fact, during that great age sailed in both the west and the east, going farther and farther south along the shores of Africa, until at last the entire African continent had been circumnavigated. But all this knowledge was lost, and the memory of it is only preserved in tales no one would seriously believe. Coins found in the Azores prove that Greek or Phoenician ships reached there in the fifth century. And to anyone familiar with ocean navigation this fact is enough to open the widest perspective. I would say that although it cannot be proved, they even found their way to the American continent. It is possible they could have done so, and therefore that they did do so. I may mention here that the Swedish professor, M. Nilsson, has pointed out to me that in his opinion the description in Homer's Odyssey of the land of the Laestrygones, with its narrow fjords and light nights, must apply to the western coast of Norway.

I know that this is a little too much for historians to swallow, but my only objection to that is that historians have difficulty in believing that things have happened if they are not written down. But it is an important fact that, in reality, *most* of the things which have happened in the long history of mankind have not been written down at all. This is one of the truths which gives archaeology its great advantage and power.

What has been interesting *me most* during this unforgettable voyage and visit to Greece, when I have tried to think over some of the problems, is the astonishing parallel between that Greek Viking Age and our Northern Viking Age of much later date. The latter has the same background as in the south: the development of the boat to a sea-going ship, the period of expansion during two to three hundred years, the economic origin of the colonisation spread and scattered over an enormous space of the North Atlantic coasts and, finally, the so-called decline and fall of the colonies, their losing their nationality and independence, and being absorbed by other nations and peoples. Like the Greeks, they created colonies and inhabited much new land, but they were never empire-builders, they never created anything like an empire at all, the reasons for which I shall not try to enter into here in this brief discussion.

From a Norwegian point of view there *is one* thing different from the Greek development, and it lies in the difference of the natural conditions. In Greece you are at sea the moment you leave the coast; in Norway, it is quite the contrary. There you have the long Norwegian *skjærgård*—that is, the enormous shelter round our coasts in the shape of thousands and thousands of skerries, holms, islets and islands, which creates a highway along the Norwegian coast, the oldest we have in our history and most important in explaining a series of questions in our chronicles. It does not, in fact, develop any seamanship for ocean sailing. It takes Norwegians several hours to leave this sheltered coast and reach the sea. This happens only when that stage of shipbuilding had been attained necessary for creating sea-going boats and when the economic circumstances were ripe for expansion. Of course, there are certain economic conditions which are the real background of all this. We can trace them in our archaeological material, our discoveries and excavations, and we now know its progress quite well. Especially have our Viking ship finds revealed to us many fundamental features of development. We read in these discoveries as in a book—a story of the whole thing. The first large-scale crossings of the North Sea belong to the eighth century A.D., and by about 800 the expansion was in full flower. About that time the Vikings begin to appear off the Anglo-Saxon, Scottish and Irish shores; the tenth century is still a full Viking Age, and in the twelfth it reached its end, at least in the shape of its original character. Our discoveries have revealed to us the high standard of shipbuilding to which our ancestors in the Viking Age had attained. The fine, well-shaped boats crossing the North Sea and the Atlantic were open sailing-boats not very large. The largest we know is the Gokstad ship (75 feet; Plate I).

The very name of *Viking* has at one and the same time an uncomfortable sound and a proud one to British ears. We read so very much of the fear, fright and terror they spread; and, of course, I cannot deny that there must have been something very gloomy about the whole affair for the British to have kept this feeling for so many centuries. And I must, of course, as a veracious archaeologist, admit that a short visit to the London Museum, with all the swords, battle-axes and spearheads of iron lost in the Thames from Danish and Norwegian longships on their way up to London on some disgusting purpose, confirms the story. But the real and true picture of the Viking expansion is, after all, quite different. The sword belongs to the time, it is the equipment of the age. But the very result of the expansion and, as I believe, the original aim, was colonisation, the hunger for land, and the scythe, sickle and spade are much more the real symbols than the sword.

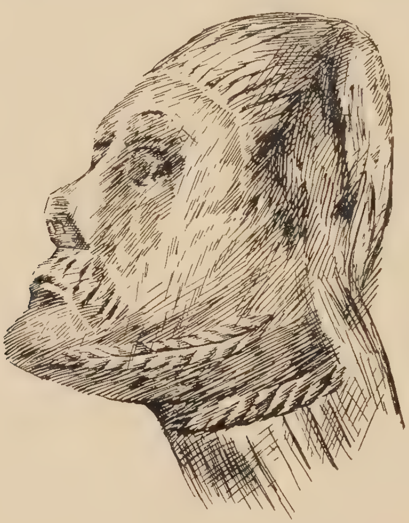

FIG. I.—THE YOUNG VIKING.
Sculptured head from the Oseberg find, Norway, *ca.* A.D. 850.

I shall not here enter into a description of this expansion, but only point to the fact that it covered a large number of countries in Western Europe from France—England—Scotland—to Ireland. They also journeyed farther—to Spain and North Africa. And as a final memory of that particular aspect I may mention the lavish and somewhat theatrical voyage of one of our most powerful Norwegian kings, Sigurd Jorsalfar, who in 1126 sailed here in the Mediterranean and went to Byzantium to see the Emperor. The saga tells of this very thoroughly considered solemn entrance where he had instructed his guard to leave a gold horseshoe on the ground when he was riding through the Golden Gate—the very spot we visited last Sunday.

The colonisation of inhabited countries like France, England and Ireland led to results of lasting significance to Western civilisation. It is a matter of symbolic interest that all those names, England, Ireland and Scotland, are Norse, just like the countries they also named by the word *land*—Sutherland (in Scotland), Shetland, Iceland, Greenland and Vinland. Most remarkable of all the Norwegian colonies is the Isle of Man, where the economic and social institutions of Norway have been kept most intact. Dublin, similarly, was a Norwegian town for hundreds of years, housing kings of Norwegian stock. And Shetland, Orkney and the Hebrides were all originally settled by Norwegian peasants in the Viking Age. And once the expansion was in flow it went on farther. Norwegians discovered and settled in the Faroes, Iceland and Greenland. Iceland, in particular, to-day an independent nation, has been the large reservoir of the best of the Viking Age expansion, a *Graecia Magna* to Norway and the northern countries, creating the large epic literature which has lifted them all up in the memory of Western civilisation. As Greece would not have been Greece without *Graecia Magna* and Sicily, the Norwegian and Norse culture would have been nearly nothing without Iceland.

When Iceland was reached, the Norwegian sailing-ships did not stop—the story of this last chapter of Viking Age expansion is like a fantastic romance, and I shall conclude by telling it in a few words. It concerns the colonisation of Greenland and the discovery of America.

It happened that ships on their way from Norway to Iceland sailed too far west, and in Denmark Strait, got within sight of the mountains of East Greenland. The sagas mention the names of some of the men who had thus seen Greenland. This was in the reign of King Harald Haarfagre (Harold Fairhair). And when Iceland had been settled by Norwegian immigrants, there was a great deal of talk about going to the country which lay to the west of Iceland.

These plans were to be realised by *Eirik Raude*, a man of Norwegian birth who had come to Iceland when grown up. He was of an adventurous turn of mind, and one day he translated the talk about sailing west into action. He found Greenland and circumnavigated a large part of the country, starting from the east coast and continuing up the west to a very high latitude. He was away three whole years, and in the summer entered all the fjords, making a thorough investigation of the country with a view to its colonisation. It is one of the most remarkable voyages of exploration ever recorded in the annals of geographical discovery, as Nansen has justly said, and the name of Eirik Raude deserves a place among the greatest.

When he returned to Iceland, Eirik Raude sought to induce people to accompany him and establish a colony in Greenland, and the first emigration from Iceland to Greenland started in 986, and continued during the following years until the Norwegian (Icelandic) settlements in Greenland had become firmly established. These settlements formed two main colonies, which went by the name of *Østbygden* or eastern district (corresponding to the present district of *Julianehaab*) and *Vestbygden* or western district (the present district of *Godthaab*). In these colonies a Norwegian peasant culture developed based on an economy similar to that of Northern Norway and Iceland, with cattle-breeding as the main industry, supplemented by hunting activities of all kinds (sea-birds, reindeer and seal).

The excavations which have been carried out in Greenland during the last decades have in an astonishing manner restored to us an old Norwegian peasant community, which at one time was almost forgotten, with its houses, barns, stables, workshops and storehouses, with its churches and churchyards, its graves and grave treasures, and they have at the same time furnished the background of the voyages to America and the discovery and attempted colonisation of Vinland. Eirik Raude's farm, situated at the head of a fjord—*Brattalid* was the name he gave it—has been located, and here stood the house in which Eirik's son, Leiv Eiriksson, spent the years of his childhood and youth, and whence he set out to find new land to the westward. Excavations of the old episcopal seat at Gardar, farther out in the same fjord, have, moreover, confirmed the tradition that Leiv Eiriksson christianised Greenland, as the oldest church ruins date from his time.

It was from this peasant community, through its first and second generation of bold seamen and explorers, that the discovery of America was made, and the excavations mentioned have given new substance and significance to the old Icelandic–Norwegian accounts of the Vinland voyages as related in the sagas. We are now in a position to tell with a fair degree of certainty what actually happened and in what manner.

The first to sight the coast of North America were people bound for Greenland either from Iceland or Norway and who sailed too far west—exactly in the same way as Greenland in an earlier period was discovered by people bound for Iceland from Norway. And the Icelandic Greenland saga related in the famous Flatøy Book gives the story of one of these men who thus saw the coast of North America. His name was Bjarne Herjulvsson, and he was on a voyage from Iceland to Greenland during the summer of 986 when he was driven out of his course; he passed south of

Greenland and finally sighted land to the westward. It must have been the southern part of the coast of Labrador. He then turned northwards and saw land on several occasions, until he finally set his course to the east and reached Greenland, where his father had gone to live and which was his destination. From this time on, people in Greenland knew that land was to be found farther west, and not long after, there was much talk of setting out to find the country seen by Bjarne Herjulvsson.

The man who first ventured out on this quest was *Leiv Eiriksson*, the son of Eirik Raude. He was born either in Norway or in Iceland, but he was still a youngster when he went with his father to Greenland. Here he grew up under the influence of the stories that were told about the new land to the west. When he was a man in his early twenties, he was sent to the King of Norway, Olav Tryggvasson, as was the custom among the great in those days, in order to spend some time with the King's bodyguard. However, the King bade him return to Greenland to convert the people to the Christian faith. It was upon his return to Greenland that he planned his great expedition which set out from *Østbygden* in the summer of 1001. His ship reached the coast of Labrador, and later sailed down the coast to Massachusetts, and perhaps even farther south. Here they remained throughout the winter, finding the country very suitable for settlement. The winter was so mild that the cattle could stay out, which was something rather different from what they were used to in Iceland and Greenland.

When Leiv Eiriksson returned to Greenland after being away a year, the question of going to the new country, Vinland, with the idea of settling down there, was discussed. It is possible that several such attempts were made both to the coast of Labrador and farther south, but reports thereof have been lost owing to the extinction of the Greenland colonies. However, the story of one important expedition has come down to us, and is related in the Icelandic sagas. It is the most remarkable and also the most important of the Vinland voyages, and its real object was settlement in North America.

Its leader was a man of Icelandic family, *Torfinn Karlsevne* by name. The expedition which left Greenland in three ships, presumably during the summer of 1020, numbered 160 men and several women. It was away three years, and during this time investigated large tracts of country, from the entrance to Long Island Sound, northwards. They met with many adventures, suffered great hardships, and had to cope with many difficulties, but in the third year they reached a part of the coast which they judged a good place to live and where they built their huts. Here they intended to remain, and the reason why they had to give up this thought was *meeting with the Indians*.

The saga relates in detail how it all happened. It was in the spring of the second year that, one day, they saw the Indians arrive in their small boats. It looked at first as if everything would turn out well. Torfinn and his men traded with the Indians, but they fell out after a while, and were soon engaged in a fight in which the Norwegian Greenlanders were in the long run unable to hold their own, although they had the better weapons. The Indians, however, had numbers on their side, and they had the further advantage of fighting in their own country. So Torfinn and his men decided to give up their colonising venture in America. They returned to Greenland, and it is likely that their stories about the Indians damped the desire to win new land in America.

However, the Norwegians in Greenland continued from time to time to visit the southern parts of the coast of Labrador in order to fetch timber. They called this coast the Forest Country (Markland).

In spite of everything, it may be said that the 400-year-old history of the new continent has, broadly speaking, preserved the main features of its original discovery. The Latin world of Central and South America of the present day is a reflection of the exploits of the great South European explorers. Present-day North America of West Germanic origin reflects a history of discovery and exploration of which Leiv Eiriksson and Torfinn Karlsevne were the first protagonists. This Norwegian history of exploration yielded a fund of experience and knowledge which was utilised in the next period of maritime expansion in Europe. So, after all, the Vinland voyages of Leiv Eiriksson had not been entirely in vain.

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In conclusion, very deeply rooted, then, are the traditions of democracy and civilisation which have tied together the western and northern European countries. The modern British commonwealth and the Northern States are inheritors of the deepest idea of Greek civilisation. In the Persian wars the Greeks fought for that very democracy—they were the defenders of freedom and civil rights against the Persian–Eastern ideas of dictatorship. We do not know what would have happened if the Greeks had been beaten—we only know that with a Persian commander and a Persian garrison in Acropolis, the world would never have had a Phidias, a Sophocles, a Socrates, a Plato and an Aristotle. Whether we have heard the names of Salamis or Plateae or not, we are still enjoying and living upon the victories which these names represent.

To me, as I suppose to you all, the way to Athens, therefore, has been a kind of pilgrimage. And having lived through it all, I feel deeply grateful, and should like to add my personal thanks to the men who have been leading us these weeks and giving us all so much of their intimate knowledge of Greece.

A. W. Brøgger.

Oslo.

AN UNFINISHED COLOSSAL STATUE AT NAXOS

At the north-west corner of the island of Naxos is a very small hamlet on the shore, which is called Apollonia. It consists of a score of poverty-stricken houses and a small quay, and is inhabited mainly by fishermen. It is a difficult landing in rough weather, and the small bay on which the hamlet stands affords little shelter.

On a slight rise about 100 feet above the hamlet, but near to it, is a small marble quarry which is ancient. Not far off on the same rise is a small modern marble quarry, no longer in use, but quite recently worked. At the small quayside are jetties specially made for the use of the quarry-workers and for the export of marble from the quarry. The ancient quarry-workers probably used the same small bay for the export of their marble.

In the ancient quarry there still lies an unfinished statue of great size (Pl. 2*a*). It is well known to travellers, and has been frequently commented on. But, as far as I am aware, no one has as yet given a full and detailed description of the statue from the point of view of the processes by which it was fashioned.

The statue was obviously roughed out in the quarry itself by masons and sculptors, and their intention was ultimately to remove it so roughed out and finish it at some other place. For some specific reason the statue never went through the final processes of completion, and was in fact abandoned by its makers, to remain for ever in the quarry from which it emerged, a ghost of a masterpiece of art, a vague outline of some greater achievement. Weather and time have done little to obscure the methods by which it was fabricated, so that it serves as by far the most interesting example of the technique by which a colossal figure was begun and at a later stage removed from its matrix.

The quarry where it lies is very small. Indeed, I think that the quarry was opened solely for the making of the colossus. Workings extend hardly outside the actual area from which the statue was extracted.

The main characteristics of Naxian marble are well known. In general it consists of very large crystals, individual crystals sometimes being almost a third of an inch in diameter. The smallest crystals are, as a rule, larger than those of the marble from other islands, such as Paros or Thasos. The marble is often stratified, and shows striations and bedding quite clearly. Usually Naxian marble has a faint bluish tint, with streaks of darker grey-blue clearly showing along the striations of the bedding. The fact that Naxian marble has a clearly cut cleavage and exhibits these lines of striation is an important factor in quarry work; for it indicates the lines along which blocks can be extracted. Other marbles, such as Pentelic, have a less evident bedding, so that the marble is extracted in much larger blocks. Almost all Naxian marble worked in modern quarries shows the blue and grey striations more clearly than ancient Naxian marble. It would seem that the immense blocks of Naxian marble such as were used to make the colossal *kouros* at Delos, or the even more impressive basis which is thought to have supported the *kouros*, are derived from quarries of the whiter marble which have since been worked out. Certainly such white Naxian marble does not seem to be available to-day.

The quarry in which the colossus lies consists of a marble whiter than the modern, but not so white as the Naxian marble used in the case of the basis at Delos and the fragments of the *kouros*. It is to some extent of a greyish or faint bluish tint, with marked striations. These striations can be clearly seen in the photograph of the head of the colossus shown here (Plate 2*b*). They are definite marble striations and not tool-marks. For the surface of the colossus has been prepared with a punch so as to produce a pocked surface in which no regular lines were made.

The various intentions of the makers of the colossus and the processes by which they hoped to complete their statue can be made out with some degree of certainty. Their procedure is best understood by arranging in order of time the various measures they adopted to achieve their purpose.

The quarry stands on a slope that leads down towards the small port at the modern hamlet of Apollonia. It seems that the ultimate intention of the makers of the statue was to remove their masterpiece on rollers, and so bring it to the port so that it might be conveyed to its destination on a raft, or some such medium of transport. Certainly no ancient ship could have held it, not so much on grounds of its size, as because of the initial difficulty of getting it on board without capsizing the ship or breaking the gunwales or sides of the ship in the process. The Delian basis is the largest single block of marble of Naxian origin known, and must have been taken from Naxos to Delos by raft in fine weather. At the same time any assumptions concerning transport must be to a large extent conjectural.

Once the site of the quarry from which the statue was to be hewn had been determined and its accessibility to the shore established, the makers of the statue appear to have worked as follows:—

(1) The surface of the marble rock was cleared and smoothed preparatory to the major work of making the statue *in situ*. This clearance would have been effected with quarrymen's picks, with wedges, and with any other means at the disposal of skilled stone-hewers.

(2) On the smooth surface the outlines, in plan, of the statue must have been drawn on the surface of the marble. This could have been done in paint or with charcoal.

(3) Round this outline, and outside it, the more expert quarrymen then

began their most laborious task. They cut into the solid marble rock a trench wide enough to hold a man, and to allow him scope for further and more detailed work. The cutting of this trench is in many ways the most astonishing aspect of the whole enterprise. For the cutters were not content merely to make a clearance round the outlined statue, but they actually gave a neat and careful finish to the trench itself. The bulk of the marble was presumably removed by punches and picks. But the sides were most meticulously finished off by means of a series of carefully punched lines, so that, in the end, a relatively smoothed surface was obtained. The photograph (Plate 3*a*) shows the *outer* side of the trench opposite the freed side of the statue. A further photograph shows a closer view of the carefully punched lines (Plate 3*b*). The whole figure with the trench round it is seen in Pl. 4*a*.[1]

The method by which this trench was cut was thus most methodical and painstaking. An enormous mass of marble must have been removed in its making. The regular bedding of the marble probably facilitated the work, and the lines of punch-cutting carefully follow the lines of cleavage of the marble.

In due course the trench was completed so that the statue stood as a kind of silhouette, freed on all sides by a trench which is about 8 feet in depth at its deepest.

The cutting of this trench is certainly one of the most remarkable examples of patient quarry work known.

(4) The next stage in the work was to shape the form of the statue as a solid in three dimensions. For up to the last stage it had consisted only of a projection from the matrix rock, bearing the *outlines* of a human form. This shaping was done with a variety of punches in the normal manner of Greek sculptors prior to 450 B.C. The marble was gradually broken down by repeated blows of mallet and punch until the main forms appeared. The head and shoulders, the arms and legs, and the projecting feet and hands were clearly shaped. Gradually the figure resembled a recumbent god and took upon itself the proper semblance of a deity in human form. It stood clear on all sides from its native rock, separated from the quarry by a trench of an average of 3 feet in width. The maximum length of the colossus is 35 feet, and its maximum width 8 feet.

(5) The makers then had to face the problem of giving the figure an existence independent of the matrix to which it was attached. While the cutting of the trench was by far the most laborious task they had so far undertaken, the removal of the figure from its core, its lifting from the matrix, presented by far the most hazardous problem of the whole enterprise. How this was effected can be clearly seen. At the lowest level, at the junction of the statue with the native rock, the expert quarrymen drove

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[1] The right edge of the trench on the right of the statue has to some extent been broken away and rebuilt in recent times of loose stones.

in wedges which were intended to split off the entire statue at one natural cleavage in the marble. The marks where these wedges were driven in can be seen at the very bottom of the trench. The wedge-holes are plain all along both sides of the statue at its lowest level (Plate 4*b*).

These wedges could have been wedges of wood or of metal. If of wood the actual splitting process would have been achieved by wetting, the consequent swelling of the wood acting as the leverage. In the case of metal, the wedges would have been slowly and steadily driven in simultaneously all round the statue.

It is interesting to note that metal wedges are so used to-day in most marble quarries. An example of a marble block so split by a wedge in the adjoining modern quarry at Apollonia is here shown (Plate 5*a*). The marks of the modern wedges are clear, and it is to be noted that the marble is split, as in the ancient quarry, neatly along the line of cleavage. The cleavage in turn is indicated by the natural striations of the marble, which are here very easy to see.

It is naturally impossible to reconstruct in every detail the final and most vital process by which the statue was removed from the matrix. Probably wedges were driven in simultaneously all round the statue at regular intervals. To judge from the surviving wedge-holes on the statue (Pl. 4*b*), these wedges were only a few inches apart.

It is now possible to understand why the trench was cut so wide, for considerable space for movement would be required by those who drove in the wedges—room for the blows of the mallet as well as for inspection. For it was of vital importance that the statue should, if possible, come away from its matrix as a whole.

(6) The removal of the statue from the rock seems to have been achieved as anticipated, and the next step was to shift the figure down towards its destination. Probably at this stage the lower part of the trench by the feet of the statue was cut away, to allow it to be conveyed on rollers down the slope. By the attachment of ropes, to act as guiders and checks, the direction of the statue as it was removed could be safely controlled by man-power.

A start was made with this removal, and then something happened which ruined the whole enterprise. The figure was actually taken some two feet downhill (Pl. 5*b*) when something occurred which, in the opinion of those in charge, made a continuation of the enterprise not worth while. In my opinion, the first stage of the actual removal of the figure revealed flaws in the marble which were unexpected. The head and shoulders to-day exhibit two severe cracks (see Pl. 2*b*) sufficient to make it impossible for the sculptors to work the statue in detail. There are no other cracks on the body of the figure, so that one is driven to this conclusion, if one assumes that it was something purely technical which caused the abandonment of the work.

But there are other possible reasons. Political troubles which might have caused a drying up of the necessary funds for the work, or the abandonment of the work by the experts for private reasons of their own, must also be taken into account. The cracks visible in the head and shoulders may have been caused by frost and weather at some date long after that of the making of the statue. But it may equally be possible that these cracks developed during this last and most hazardous process of removal. Probably the first heave of the statue on its journey produced these flaws. The marble of the head and shoulders was, perhaps, insufficiently cleared from the matrix.

Of the exact reason we shall never be certain. One thing we do know, that the work was abandoned for ever at this point.

It remains to consider other aspects of the statue. Its date must remain vague. One cannot date a work so incomplete as this with any precision.[1] It has generally been assumed that the figure must be of archaic date because it is a colossal figure and because of the simplicity of its technique. But the punch was used for the main work on all Greek statues down to the time of the carving of the pedimental figures at Olympia on the Temple of Zeus. The methods by which colossal monolithic figures were removed from their quarries need not have varied much from century to century. Beyond saying that, on technical grounds, the figure is prior to about 450, when the traditional use and importance of the punch began to die out and a new technique began to appear, we cannot come to any decision that is more definite. The statue was intended to be male, and apparently bearded, to judge from the projection at the lower part of the roughly sketched face. The attitude of the arms, with the right forearm extended, might well suggest a sixth-century date. But, on the other hand, the feet are close together, and not in the traditional stance of an archaic *kouros*. The figure might just as well belong to the early fifth century as to the late sixth. The only archaic figure comparable to it in size is the great *kouros* of Thasos, who is a *kriophoros*. But the two statues have little in common, in shape, style, or general appearance.

Its importance lies not so much in the contributions it may give to our knowledge of the history of Greek art, as in the light it throws on the patient and highly skilled technique which went to the making of colossal statues.

STANLEY CASSON.

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[1] A short note by von Massow in *Jahrb. Anzeiger*, 1932, p. 266, is of some interest. It is there suggested that the figure is intended to be that of Dionysos and not Apollo. Von Massow dates it to the early fifth century and suggests comparison with the figure of Zeus in the Olympian pediment. But, as I have suggested above, the condition of the colossus does not allow much scope for a discussion of date or style. Beyond assuming a *terminus ante quem* of 450 B.C. one cannot be more precise as to its period. C. Blümel in his *Griechische Bildhauerarbeit*, p. 48 and Pls. 3 and 4, discusses the colossus on technical grounds.

NEOLITHIC BLACK WARE IN GREECE AND ON THE DANUBE

Professor Myres has been the chief agent in inducing English archaeologists to appreciate the significance of the Danubian province for Greek prehistory. Since his first paper in *Science Progress*, 1896–7, he has frequently discussed in a stimulating manner the relations between the two areas. In his latest pronouncement [1] he not only shews how political considerations have affected the interpretation of the relevant facts, but has stated in an unequivocal way the essential conditions for an objective decision between two contrasted views: 'not only continuity of material on a series of sites, but coherence of styles within a chronological scheme.' Six years ago both desiderata seemed far from fulfilment. The Danubian province was still separated by the Balkan wall from the Aegean; not even its relative chronology was clear. Subsequent discoveries by Heurtley [2] in Macedonia and by Fewkes [3] in the Morava valley have substantially reduced the gap between the two provinces in one direction. Even on the Middle Danube Banner [4] and Tompa [5] have established a provisionally acceptable cultural sequence. At the same time fresh comparative material has been made available beyond the Aegean which must affect any interpretation of Danubian–Aegean relationships. A re-examination of some of the issues might then appropriately be dedicated to the far-sighted savant who first inspired my own interest in the Danube valley.

A general agreement between the oldest Greek neolithic—Thessalian A—and the miscellaneous cultures of the Danube basin can be noted only in passing. Common to the two areas are both widely disseminated traits, such as the manufacture of female figurines, and also more distinctive peculiarities, such as the use of adzes to the exclusion of axes and a preference for *Spondylus* shell for ornaments. It is only in the second phase of the Greek Stone Age that precise agreements between ceramic groups north and south of the Balkans can be grasped. Apart from the Transylvanian and Black Earth analogies to Dimini ware the current interpretation of which has been acutely criticised by Wace,[1] Frankfort [2] recognised that certain ' black carboniferous wares ' which appear simultaneously in ' neolithic B ' not only denote a break with the old local tradition, but can be precisely matched at sites like Vinča north of the Balkans. Heurtley's Macedonian campaigns, notably at Sérvia,[3] have confirmed both observations. Both authorities deduce a Danubian invasion of the Balkan peninsula to explain the ceramic agreements. It is these agreements and their interpretation that I wish to examine here.

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[1] 'The Cretan Labyrinth,' *JRAI* LXIII (1933) 291 and 308.

[2] Summarised in *Prehistoric Macedonia*, Cambridge, 1939.

[3] 'Neolithic Sites in the Morava–Danubian Area,' *Bul. Amer. School of Preh. Research*, 12, 1936, 5–82.

[4] *Dolgozatok* a M. kir. Ferencz-Jozsef-tudományegyetem Archaeologiai Intézetéből, IX–X, 122.

[5] *BRGK* 24–5, 40 ff.

In the first place the epithet ' carboniferous ' needs reconsideration. By this term Frankfort means to imply that the wares concerned owe their black colour to free carbon as contrasted to blackening by reduction of iron salts in the clay. In both cases the black colour would be destroyed by heating in an oxidising atmosphere, but with carboniferous ware the process is irreversible: reducing gases such as hydrogen or carbon monoxide cannot replace the free carbon burnt out in oxidisation, but they will reconvert red ferric oxide to lower and darker compounds. Now I [4] heated samples of wares diagnosed as carboniferous by Frankfort (including a piece of black ware from Thermi) in oxygen till every atom of pure carbon had been burned out, leaving the sherds red or orange. I then reheated them in hydrogen or coal gas, and thereby restored their original black colour or induced an even darker grey than was exhibited by the prehistoric fabric. Hence inspection cannot reveal how a prehistoric potter actually blackened her vessel.

Certain indications are nevertheless available. Orange or reddish blotches may admittedly be left on carboniferous black vases by irregular firing wherein parts of the surface become oxidised or fail to get smoked. Where, however, we observe consistent variations from black to red on the same vase we are probably dealing with the deliberate oxidisation and reduction of ferruginous clays as Frankfort admits. The same is true when the same fabric exhibits variations in tint from black to red on different vessels—as for instance on the pottery from Thermi. In such cases the distinction between black ware and red ware loses its rigidity. The conditions for black ware production, formulated by Myres, of course hold good; for a smokey fire tends to give a reducing atmosphere. But in the case under discussion the term ' black ware ' implies only that the most popular tint for vases was grey or black; it does not mean that the potter was technically incapacitated from producing perfectly good red vases at will.

Now the Macedonian and Greek wares that concern us exhibit just the variations here mentioned. From Sérvia itself Heurtley describes ' black ' bowls adding ' but the lower part is yellow ' and ' but the upper part is yellow and the lower red.' From Hagios Mamas I noted at Thessalonike a 'burnish-decorated' (stroke-burnished) vase black inside and orange-yellow outside and red-rimmed black vases, and from the neolithic level at Vardino black-rimmed vases red outside and black within and vice versa. Even in Central Greece Kunze states:[1] 'Neben dem schönen tiefen Schwarz kommt vereinzelt auch ein gelbliches Braun vor' and mentions 'Ubergänge an einem Stuck von Schwarz in Grau, Braun, Gelb und Rot' and 'die häufige Unterscheidung der Innen- von der Ausseneite durch eine andere Farbennuance.' A sherd of stroke-burnished[2] ware from Corinth is brown outside and deep black inside. In any large collection of later neolithic 'black wares' variations of this sort can be recognised. And both in Macedonia and at Corinth[3] they are associated with good red-slipped ware, genetically allied to them, as well as with 'neolithic *Urfirnis*'—a clear fabric of fundamentally different ancestry in which the black or red polished surface is imitated by a lustrous paint.

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[1] *ESA* IX (Minns-Festschrift) 123.

[2] *Studies* II 42.

[3] *Ant. J.* XII (1932), 228–36.

[4] *Man*, 1937, 55.

The elimination of the epithet 'carboniferous' in no wise reduces the cogency of the comparison between wares from Greece and from north of the Balkans. The 'burnished ware' from Vinča and allied sites in surface colour ranges, like the Greek, from 'pale smoke grey to practically black and from maize yellow to burnt sienna.' Decoration by stroke-burnishing and by ribbing,[4] *i.e.* fluting or corrugation, agrees precisely with the practice in Greece. Incised patterns in both areas include punctured ribbons and even spirals.[5] But on the Danubian side of the Balkans the punctuations filling the ribbons are generally short dashes produced by jabbing a pointed tool obliquely into the clay, while in Greece the tool was stamped in vertically yielding round dots. Thin white on black, mentioned by Frankfort, is missing at Vinča, and I have been unable to find examples in this area.[6] Associated with the foregoing at Vinča[7] is a red-slipped ware, quite like the Greek and again related, at

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[1] *Orchomenos* II 50.

[2] Weinberg's term stroke-burnished is here used instead of 'burnish-decorated' used by Frankfort and 'pattern-burnished' used by Engberg and Shipton for the same technique.

[3] Weinberg, 'Remains from prehistoric Corinth,' *Hesperia* VI (1937) 498.

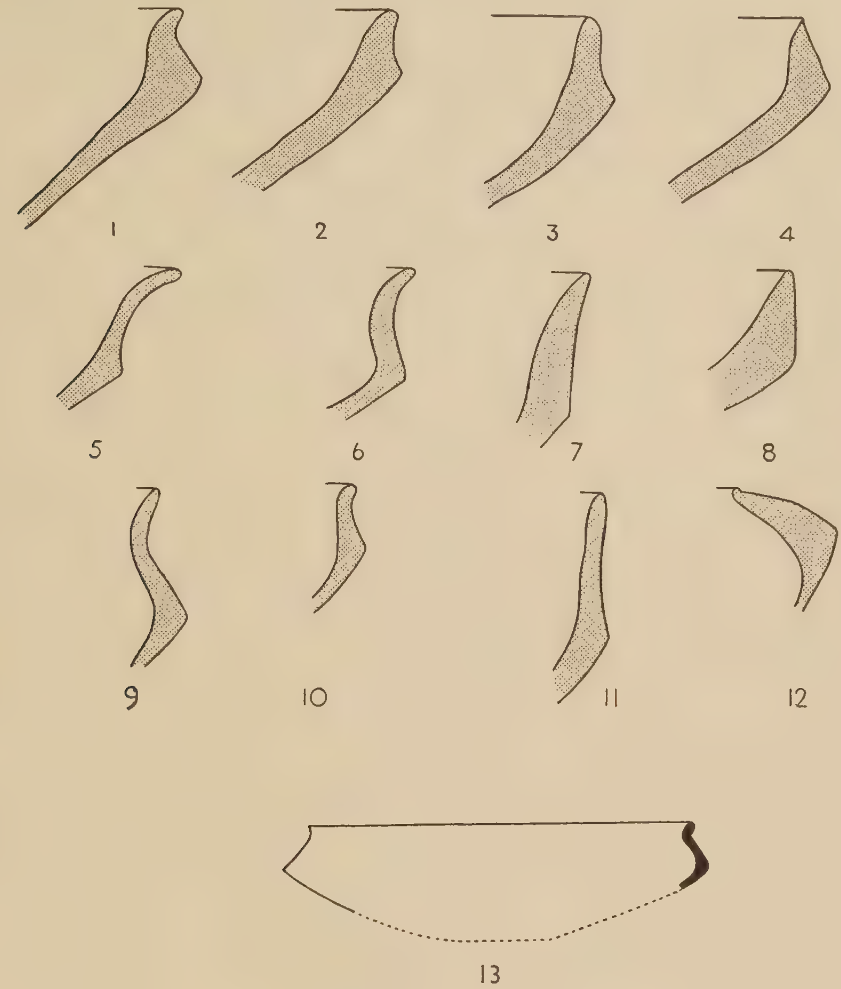
[4] For 'ribbing' used by Wace and Thompson I substitute 'fluting' or 'corrugation' in as much as the decorative marks are actually pressed into the clay.

[5] The spirals on the 'legs' from Drakhmani figured by Frankfort have been incised when the clay was quite dry or even after firing in a manner more reminiscent of the West Mediterranean and Syria (Sakjegözü) than the Danubian area, where the incisions were executed in the wet clay, leaving a broader line.

[6] Nor do I know any knobbed ware really like the Greek. The sherds of corded-ware from Hagia Marina, though undoubtedly northern, must on the strength of the evidence from Eutresis be assigned to the Early Helladic settlement and have no connection with the burnished wares.

[7] Vassits, *Preistorijskaya Vinča*, II and IV, illustrates most points, often with coloured

Fig. 1.—Carinated Bowls.



1– 4. Vinča (pit levels)
5– 6. Alişar, Chalcolithic
7– 8. Orchomenos, Black Ware
9–10. Knossos, Neolithic
11–12. Corinth, "Neolithic Urfirnis"
All 1/1.
13. Sérvia 1/3.

least technologically, to the burnished 'black' ware and comprising black-topped vessels (black inside and round the rim but red below outside)

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plates; for an English description of the fabrics, see Fewkes, *ASPRB* 12, 27–36; for a striking comparison of stroke-burnished vases from Vinča and from Boeotia, see Goldman, *Eutresis*, 77.

just as in Macedonia. Such significant forms as wide carinated bowls and high-pedestalled calices or fruit-stands are also common to both areas.

But the wares just mentioned cannot be called 'Danubian' without qualification. They are confined to a limited group of sites extending down the Morava valley from Pavlovče (55 miles south of Niš) to the Danube and beyond that river across the Banat to Tordos on the Maros and typified by Vinča itself.[1] The peculiar culture here disclosed may be termed the Morava culture. Now it shares with other cultures of the Danube basin such traits as the use of adzes of shoe-last form instead of axes, the spiral in ceramic decoration and a preference for *Spondylus* shells as ornaments. But in its whole economy, characterised by permanent settlements leading to *tell*-formation, this Morava culture is dramatically contrasted to those of the migratory cultivators who produced in the Middle Danube basin, on the Tisza, the Körös and then the Tisza cultures and, further west and north, the classical Danubian I and Danubian II (Lengyel) cultures.[2] The distinction is in fact so fundamental that Menghin[3] classes Vinča among his 'Taurische Dorfkulturen' in contrast to the 'Donauländische Kulturkreis.' Though pottery characteristic of the Körös culture is in fact associated in large quantities with the wares described in the lower levels at Vinča and a few Tisza vases occur as imports higher up, the fabrics significantly related to the Greek, such as stroke-burnished ware, do not occur in any of the more normal Danubian cultures.[4]

Of course the non-ceramic traits, common to the Danubian area and to neolithic Greece in period A, persist in the latter region into period B. Taken in conjunction with them the new ceramic agreements in that period justify the treatment of the later Greek neolithic, apart from Dimini, as forming one facies of a single group, extending across the Balkans, to which the name Vardar–Morava complex might provisionally be given, albeit the peninsular aspect of this complex is richer than the north Balkan. Nevertheless the restriction of the connecting traits to the limited area in the Danube basin defined in the last paragraph forbids us to derive the new elements in Greece from that quarter till alternative possibilities have been examined.

A derivation of neolithic B wares from the local Greek pottery of neolithic A is more plausible now that the black and variegated fabrics of that period have become familiar from excavations in Corinthia and the Peloponnese. Nevertheless despite technical similarities the contrast both in surface-treatment and in form between the earlier and the later black wares must strike anyone who handles the material in bulk. And the conditions under which the black burnished ware of the later group appears at Sérvia[1] seem to guarantee its intrusive character. But beyond mainland Greece relevant parallels to the Vardar–Morava group of wares can to-day be found.

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[1] For the distribution cf. Nestor, *BRGK* 22 (1933) 32–6, 52–4, and Fewkes, *op. cit.*

[2] As defined in my *Dawn of European Civilization*, 1939, 93–104.

[3] *Weltgeschichte der Steinzeit*, 350.

[4] Note also the occurrence of stone ('marble') vases at Vinča as in Thessaly and Macedonia, but at no more northern site in the Danube basin at any time at all. Specimen at Birmingham.

Evans has insisted on the 'great gulf fixed' between the neolithic of Crete and of Mainland Greece, but the context shows that he had in mind essentially the earlier or A neolithic of Thessaly with its clear and painted wares. The neolithic pottery of Crete is in fact essentially a burnished 'black ware.' But in calling it black one is considering the potter's aim as represented in the finest and most popular products. According to Evans[2] this was achieved regularly first in middle neolithic times, the lower neolithic being 'distinguished by its brownish surface.' In the sherd collection magazined at Knossos one can find even in early neolithic layers sherds dirty buff outside and dark grey inside or reddish orange outside and grey black inside.[3] Sherds of black vessels in which the rim is flushed red or orange (on both sides) are common at all levels. Good red and red-brown sherds can be found among the black throughout though perhaps more commonly in the later levels. Evidently the firing methods were similar to those which produced the Vardar–Morava types of fabric.

As there, the surface is highly burnished, the tool-marks being conspicuous. On a number of sherds from middle and upper neolithic layers[4] the tool-marks are spaced at intervals exposing dull surfaces between them. This is the technique of stroke-burnishing and was presumably applied deliberately even though the result was not to produce a regular pattern till EM I. Then the technique was effectively employed to give formal designs on Pyrgos ware.[5] This is generally grey, the burnished lines showing up as black, but one vase from Pyrgos, No. 7473 in Candia Museum, is pink with stripes of polished red.

Among the forms of the Knossian neolithic carinated bowls are common at all levels and in the upper neolithic pedestalled goblets also occur, as again in Pyrgos ware. Frankfort[6] was struck by the 'Danubian' similarities of 'open bowls with a sharp edge at the widest part unconnected with anything known in the island' (*sic*). 'Shapes as well as designs and handles and the strongly tectonic character of the decoration link this pottery up with the Danubian ware.' But the agreements are precisely with the group of wares the Danubian origin of which we have queried. The technique of the decoration, round punctuations instead of dashes for example, agrees more immediately with the Greek and Macedonian than with the north Balkan. The handles in question are found on the Vardar rather than on the Morava. All the peculiarities noticed here can be paralleled as well to the south-east as to the north-west.

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[1] *Ant. J.* XII (1932) 228–36.

[2] *Palace of Minos* I 36.

[3] Examples in boxes E, I, 5, 9th m; B, I, 1, 8th m.; B, I, 10, 8th m.

[4] Examples in boxes E, I, 5, 7th m.; E, III, 6, 7th m.; B, I, 1, 4th m.; B, I, 1, 3rd m.

[5] Evans, *Palace* I 59.

[6] *Studies* II 55; Frankfort mentions also 'shoe-last celts,' citing the axes figures by Evans, *Palace* I, fig. 15; these are of course axes and the absence of celts serviceable only as adzes is really a feature distinguishing the Cretan Stone Age from that of the Mainland and the Danube basin.

Evans with his usual prescience described neolithic Crete as an insular offshoot of a vast Anatolian province. Excavation has amply justified his diagnosis. The earliest central Anatolian pottery, the 'Chalcolithic' of Alişar,[1] is 'a polished ware with a grey-buff slip.'[2] 'Black-topped sherds also appear. A few sherds showed a yellowish-red zone on the inside near the rim.' But we are also told that 'black ware with a thick polished, sometimes burnished, slip must be considered the typical ware of the Chalcolithic Age, appearing sporadically at the beginning and towards the end replacing the greyish-buff. On the insides of rims we find a reddish zone due to firing.' Moreover 'red ware appears sporadically from the very oldest layers shewing there a dark red colour—a little later brick red. This changes gradually till the rich red typical throughout the Copper Age is obtained. The interiors are often black and black-topped pieces are frequent.' The vessels are decorated by flutings, incisions and round punctuations (as in Crete and Greece). 'Only one sherd with decorative burnishing was found,' and it belongs to the Copper Age. But on the Chalcolithic black ware 'the strokes of the burnishing tool are made carefully parallel and on the insides of bowls often converge to the centre.' Here we have the technical features already noted on the later neolithic of Greece, on the Morava fabrics and the Cretan neolithic. And at Alişar we again have carinated bowls and bowls on a high hollow pedestal.

Similar fabrics characterise the lowest or neolithic levels of the tell at Mersina in Cilicia, now being excavated by Prof. Garstang.[3] From the deepest levels, going down 10 m. below the horizon where sherds of 'Chalcolithic' Tell Halaf ware occur, he has obtained a burnished 'grey' ware the surface colour of which varies from deep black to good red. Black interiors and red exteriors occur and the black vessels often exhibit a red flush round the rim precisely as at Knossos. These black and red wares persist all through side by side with clear painted wares made on the spot. Some of the later black-burnished vases are painted with designs in thin white recalling the painted wares of Kusura A and more remotely Yortan. To me these Cilician and Anatolian white on black wares are more closely allied to the similarly decorated vases from Macedonia and Central Greece than anything I know north of the Balkans.

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[1] van der Osten, 'The Alishar Hüyük 1930–32,' *Oriental Institute Publications* XXIX 52 ff.

[2] I believe the 'slip' here is a mechanical slip formed by the burnishing process in the manner described by Fewkes, *loc. cit.* 28, in the case of Vinča wares.

[3] *LAAA* XXVI 38–72. Prof. Garstang has kindly allowed me to handle a large election of the sherds at Liverpool.

Farther east at Ras Shamra, again stratified below Tell Halaf ware in *couche* V, Schaeffer[1] has found grey wares with the surface varying from black to a rare ‘ rouge lustré ’ showing the familiar variations in colour on the same vase. The surface is highly burnished and ornamented by stroke-burnishing or incision and punctuation. Then at Judeideh[2] the earliest pottery, found in the same stratigraphical context as at Ras Shamra, is burnished ware. Its surface colour ‘ varies from black through brown to red, the latter being rarer.’ Some vases are ‘ pattern-burnished ’ (*i.e.*, stroke-burnished) ‘ as at Ras Shamra and Sakjegözü.’ From the latter site the incised grey burnished wares found by Prof. Garstang before the war have long been known. It suffices to insist on the presence of variegated vases partly black and partly grey-buff and of rare red sherds already in layer η, and on the use of stroke-burnishing[3] for decorative purposes and, perhaps later, of corrugations, to disclose the essential relationship with the foregoing fabrics.

The Euphrates is not the eastern limit of such wares. Christian[4] is inclined to recognise a ‘ Saktschegözü-Stufe ’ characterised thereby throughout Mesopotamia. Certainly at Chagar Bazar on the Khabur Mallowan[5] found in level 15 below the Tell Halaf and Samarra layers ‘ monochrome burnished grey and black ware,’ including buff sherds and some decorated with ‘ a burnished rectilinear design ’—stroke-burnished. But from sherds of burnished black ware from Kish for example no inferences can be drawn. For such fabrics notoriously persisted a very long time in Anatolia and Cilicia and even North Syria. Their relatives or descendants re-appear in Mesopotamia in the Uruk period.

But the fabrics here discussed can really be traced southward at least to Megiddo. Type 17 of Engberg and Shipton,[6] the grey burnished bowls, may be red, though generally grey or black, and are sometimes decorated with stroke-burnishing. Their sharply carinated profiles recall forms noted above. Westward too relevant comparisons can be made with the neolithic pottery of Malta and perhaps Sicily, but cannot be further discussed here.

Our survey has already shown that burnished wares possessing the distinctive peculiarities of the Morava wares from Vinča and of the later

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[1] *Syria* XVI 162–5.

[2] *AJA* XLI (1937) 11.

[3] *LAAA* XXIV 133; I have been enabled to handle a number of sherds at Liverpool.

[4] *Altertumskunde des Zweistromlandes*, 91–5.

[5] *Iraq* III 11 and 53.

[6] ‘ The Chalcolithic Pottery of Megiddo,’ *Oriental Institute Studies*, 10.

(B) neolithic 'black wares' from continental Greece were current over a vast area east of the Aegean. Technically at least as good ceramic agreements could be found between Vinča and Sakjegözü or between Chaeroneia and Mersina as between sites separated only by the Balkans. Moreover it looks as if the area of dispersion of our burnished wares was in fact continuous. At least excavation has satisfactorily filled in a number of gaps since the time when there was nothing between Knossos and Sakjegözü. Geographically the Morava valley looks like a northern outpost of the province rather than a centre of dispersion, even if Malta be included.

A reliable chronological scheme is admittedly still missing. The burnished wares of Cilicia and Syria, separated as they are by the immense accumulations of the Tell Halaf and other cultures from horizons historically dated about 3000 B.C., must be enormously ancient. At Ras Shamra Schaeffer[1] hazards 4000 B.C. for the beginning of the Tell Halaf phase which is a *terminus ante quem* for *couche* V where the burnished wares occur. From the proportion of prehistoric to historic debris responsible for the 104 ft. of Tepe Gawra Speiser[2] reached an estimate of 4500 B.C. for layer XX which is the end of the pure Tell Halaf phase which begins at XXV, and I am personally ready to increase Schaeffer's estimate by a millennium. For Greece we have less reliable data for guessing and from Central Europe hardly any.

Certain clues are available, however, as to the relative antiquity of the burnished wares on either side of the Aegean. The earlier or A neolithic of Thessaly and Central Greece seems already chalcolithic in comparison with say Mersina or Ras Shamra.[3] The technique of lustrous paint can most easily be derived, perhaps through Chios and Cyprus, from the Tell Halaf complex of Syria or its precursors in the 'latest neolithic' at Mersina. The stone button-seal from Tsani could best be derived from that quarter though stamp seals occur even in the Chalcolithic of Alişar. Thus the burnished wares of neolithic B in Greece would be later than Tell Halaf while their analogues in Cilicia and Syria begin before that horizon. The 'later black wares' appear in Greece later than east of the Aegean.

The same seems true of the Danube basin. In a restricted area north of the Balkans—the Lower and Middle Danube basins and Moravia—we find clay stamps, often called *pintaderas*, which in form resemble Asiatic stamp seals and are generally regarded as copies of such. Most belong to Danubian II and, as far as the designs are concerned, are a long way from the supposed models. But some are associated with remains of the Körös culture, one of these agreeing more closely than the later and more northerly specimens with Asiatic types (decorated with a filled cross). So the Körös culture, if the stamps be correctly interpreted, cannot be later than the Chalcolithic of Alişar and Syria (Tell Halaf). But in the lowest levels at Vinča Körös pottery is associated with our burnished Morava wares. Hence Morava wares too are chalcolithic while their analogues in Cilicia and Syria go back to a neolithic that is pre-Tell Halaf. In other words burnished wares begin earlier in Cilicia and Syria than in the Morava valley and in Greece.

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[1] In the Rhind Lectures delivered at Edinburgh, April, 1939.

[2] 'Closing the Gap at Tepe Gawra,' *Asia* XXXVIII (1938) 536–43.

[3] I see no reason for rejecting the copper daggers found by Soteriadhes on virgin soil at Hagia Marina; cf. also Forsdyke, *Catalogue of Greek Vases* I, pp. xvi and 23.

V. Gordon Childe.

OF THE WARP-WEIGHTED LOOM

THE ancient world had three chief types of loom, the horizontal ground loom, the vertical loom with upper and lower beams, and the vertical loom with warp weights. The third is the subject of this study, but for a clear understanding of it the character of the other two looms must be understood, and diagrams of all three types are therefore included.

The horizontal ground loom is the older of the looms of Ancient Egypt. It is known to us already from a painting on a dish of the Predynastic period,[1] but our chief knowledge of it comes from Tomb scenes and models of the twelfth dynasty.[2]

The vertical loom with upper and lower beams is known from Tomb scenes of the eighteenth to nineteenth dynasties; [3] a similar loom was later in use among the Romans [4] who may have borrowed it from Egypt.

The vertical loom with warp weights was the loom of Ancient Greece and probably at one time of all Europe, hence the surprise of Herodotus at the topsy-turvy ways of Egyptian weavers—'whereas in weaving, all others push the woof upwards, the Egyptians beat it downwards'.[5] The earliest known representation is on a black urn of the Halstatt period,[6] but the evidence of loomweights suggests that it was in use in the Lake village culture. The type persisted in Scandinavia, in parts of West Norway even to the beginning of this century,[7] and several looms are preserved in Northern Museums.[8]

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[1] Brunton and Caton Thompson, *The Badarian Civilisation*, Pl. 48.

[2] Tombs of Chnem-hotep, Baqt and Khety. Cf. Newberry, *Beni Hasan I*, Pl. 29; II, Pl. 13; Tomb of Daga. N. de G. Davies, *Five Theban Tombs*, Pl. 37. Also see Ling Roth, *Ancient Egyptian and Greek Looms*, Figs. 1–7. Johl, *Altägyptische Webestühle*, pp. 8–39. For the model from the Tomb of Mehenkwetre see *Bulletin Met. Mus. New York*, Dec. 1920.

[3] Tombs of Thotnefer, eighteenth dynasty; Nefer hotep, end of eighteenth dynasty; Nefer Ronpet, nineteenth dynasty, all at Thebes. See Ling Roth, *op. cit.* Figs. 9, 13, 14, 16. Johl, *op. cit.* pp. 39–58.

[4] Vatican MSS. See Smith, *Gr. & R. Ant.* p. 941. For the tomb painting of a loom at Rome (second half of second century A.D.), see G. Bendinelli in *Art & Arch.* XI, No. 4, 1921, and Lillian M. Wilson, *The Clothing of the Ancient Romans* (1938) Pl. X, p. 21. Tomb of Severa Seleuciana. See De Rossi, *Inscriptiones urbis Romae* I p. 21 (1857–1861).

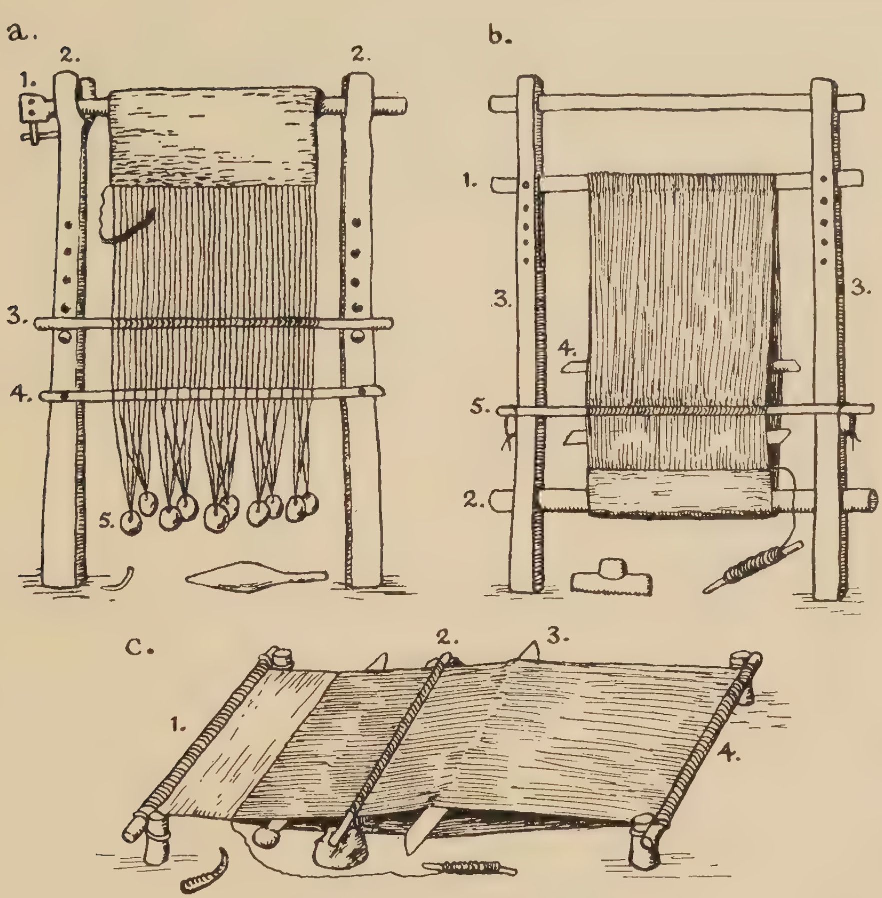
[5] Herod. II 35.

[6] M. Hoernes, *Urgeschichte der bildenden Kunst in Europa*, 1909, p. 29. Urn from Oedenburg, Hungary.

[7] According to Blinkenberg, quoting from Shetelig, in Nordhordland there were people still alive in 1910 who knew how to work this loom, cf. *Mitteilungen des K.D.A. Inst. Athen Abt.* XXXVI (1911) pp. 145–52.

[8] The looms in the Museums of Copenhagen (Denmark); of Bergen, Amble i Sogn, Christiania, and Lillehammer (Norway); of Stockholm (Sweden), and of Reykjavik (Iceland).

Fig. 1.—Diagrams of Three Loom Types.



a. Vertical Loom with Warp Weights. Northern Type. (Uppstadgogn.)

This type of loom was set up at a slant; the weaver stood to weave on it.

1. Warp beam. 2, 2. Side beams. 3. Rod heddle. 4. Shed rod. 5. Warp weights. The warp beam revolves, held by a spoke. The 'spool,' a roll of weft thread, is seen at the side of the web. Below the loom are the sword beater and the pin beater.

b. Vertical Loom with Upper and Lower Beam. Modern Greek Type.

This loom is usually set at a slight slant, the weaver sits on a wooden seat, sometimes with his feet in a pit.

1. Upper beam. 2. Lower beam. 3, 3. Side beams. 4. Shed rod. 5. Rod heddle, lashed to support on side beam. The sword beater is seen in the shed. Below the loom are the spool and the comb.

c. Horizontal Ground Loom. Beduin Type.

The loom beams are lashed to pegs in the ground; the weaver sits on the ground or the web.

1. Breast beam. 2. Rod heddle, supported on stones. 3. Shed rod. 4. Warp beam. The sword beater is seen in the shed. At the side of the loom are the spool and the gazelle horn. In beating up the sword beater is used first to hold the shed and beat up the weft, and then the gazelle horn to make a close weave.

From Ancient Greece we have several beautiful vase paintings of the warp-weighted loom [1] of which one is shown here on Pl. 6, and many delightful but exasperatingly difficult references to it in the literature.[2] Even Vogt, with all his knowledge of the Northern looms and the textiles of both the Lake villages and of early Scandinavia, finds it impossible to come to any definite conclusion about weaving in the Greco-Roman world.[3] Though his despair is not without reason, we believe that both paintings and references, most of them poetical, are capable of interpretation. The latter are difficult, because weaving and spinning were such common features of daily life that poets and playwrights expected their hearers to pick up any witty or fanciful allusion—a pun, the merest hint—to any tool or operation connected with them, and the paintings are sketchy and leave much to the imagination. Yet these sources are certainly richer than any ancient sources we have for the study of the two other types of loom, but whereas these are still in use to-day, the warp-weighted loom has perished from the world.[4]

If we want to study the horizontal ground loom (see Fig. 1*c*) we can find it among Beduin Arabs on the borders of Egypt, in Trans-Jordan and Syria, and in Palestine among housed as well as tented folks: in these lands, as in the Northern Sudan, it is used chiefly for wool, in the Southern Sudan for cotton. Among these weavers answers can be found to some of the questions that torment the archaeologist. In the desert we can see long webs stretched on the ground for tent pieces, twenty-five feet long and more, while the weaver sits on her work and progresses along it moving the heddle and shed rod in front of her as required. Breadth beyond the capacity of one woman is achieved by two who sit, one on either side of the loom. The methods of warping, the management of rod heddle and shed rod, the passing of the weft, the way of beating up with the sword beater and the gazelle horn, can be watched and used to interpret the Tomb pictures. Further, methods of making patterns, either those in warp face weave or in weft face (both tapestry and twined weave), even double weave, can be seen and help us to understand how pattern as well as plain weave was achieved by the Ancient Egyptians with this simplest of looms.

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[1] There is no article or book giving complete information. For a good collection of references see *Corpus Vasorum Antiquorum*, Robinson Coll., fasc. I, III, G, p. 38.

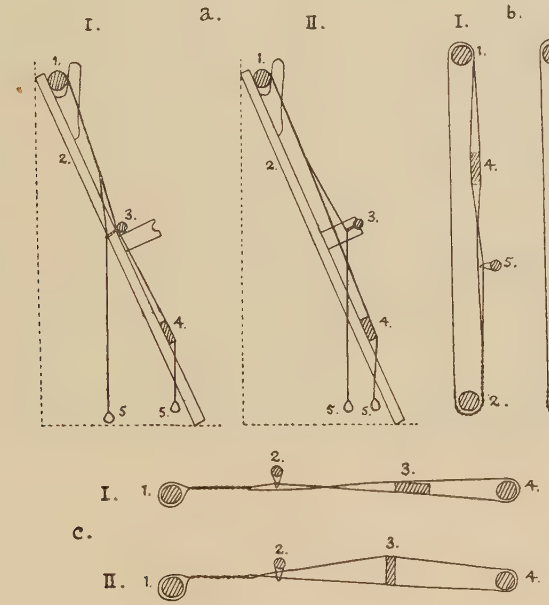
[2] H. Blümner, *Technologie und Terminologie der Gewerbe und Künste bei Griechen und Römern.* 1875 and 1912. Also Johl, *Die Webestühle der Griechen und Römer.* Privately printed, 1917.

[3] Vogt, *Geflechte und Gewebe der Steinzeit* p. 103. (1938). "Man sollte meinen, dass wenigstens über die Weberei der griechisch-römischen Welt etwas Sicheres auszusagen sei. Dies ist leider nicht der Fall. Man ist dabei auf einige wenige, nicht übermässig genaue Darstellungen und die Schriftquellen angewiesen, die aber sehr schwer zu verwerten sind, da nirgends eine bewusst erklärende Darstellung des Webstuhles gegeben werden sollte."

[4] The Chilkat blanket loom is sometimes quoted as an equivalent, with its great balls of wool acting as weights, but the weave is exclusively a twined weave put in by hand and so the loom can give us no help on debateable points.

This form of study is even easier for the vertical loom with upper and lower beam, for it is still widely distributed, and in England we ourselves

Fig. 2.—Diagrams showing how the Shed is Obtained by Means of the Rod Heddle and Shed Rod.



(For key to parts of looms see Fig. 1.)

a. Vertical Loom with Warp Weights. Northern Type.
(Diagram after Broholm and Hald.)

I. The shed rod is fixed and gives the ‘ natural ’ shed (natürliche Fach).

II. The heddle rod is drawn forward to give the ‘ artificial ’ shed (künstliche Fach).

b. Vertical Loom with Upper and Lower Beam. Modern Greek Type. (The side beams are omitted) ; the ‘ all round ’ warp is shown.

I. The heddle rod is fixed and gives the ‘ natural ’ shed.

II. The shed rod is used to force the shed rod threads above the heddle threads and give the ‘ artificial ’ shed.

c. Horizontal Ground Loom. Beduin Type.

I. The heddle is fixed and gives the ‘ natural ’ shed.

II. The shed rod is used to force the shed rod threads above the heddle threads and give the ‘ artificial ’ shed.

know it in modern form as the rug loom and the tapestry loom.[1] It survives in many parts of Europe, *e.g.*, on the Dalmatian coast. But the most fruitful types for comparison with those of Ancient Egypt and of Rome are the vertical looms of modern Greece [2] (See Fig. 1*b*) and those of Palestine, Syria and Asia Minor.[3] On these looms we can see how long webs can be woven, which has been thought difficult on a loom like the Ancient Egyptian type with no revolving beam. By putting on an ' all round ' warp the length can be increased to double the height of the loom and the warp can be pulled round as required to bring the weaving down to the level of the weaver's hands.[4] To achieve a greater length than this Syrian and Palestinian weavers tie a third beam at the back of the loom, to the wall, or if out of doors to posts, and lead the warp over it and back again.[5] Among these weavers also there are good opportunities for studying warping and weaving and methods of obtaining pattern.

But for the warp-weighted loom these aids are denied us. In the Roman world it was early superseded by the vertical loom with upper and lower beam, but it survived for special purposes, such as the weaving of the tunica recta for boys on attaining manhood, and of the wedding dress and yellow veil for brides,[6] here as so often the ancient ways being followed to bring good luck. There is one mention of the old loom as late as the fourth century; Servius says that people of old " used to weave standing as to-day we see the linen weavers (linteones)." [7] In the North, as we have seen, it lingered later, and a good supplement to Greek paintings and literature and Scandinavian looms and literature is the careful key to the picture of an Icelandic loom given us by Olafsson,[8] but even he did not describe how the weaving was done. Because of this the picture of the loom on the lekythos which is republished here [9] (Pl. 6) is of the greatest

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[1] A variety of this loom with no side beams, simpler and more primitive than the Ancient Egyptian loom, is still also in existence. This is the loom of the New World, which can be studied in America, Africa and other lands. Our first knowledge of this type comes from the Proto-Chimu period in Peru, *c.* first century B.C. to first century A.D. See T. A. Joyce, *Man.* Dec. 1921. No. 106.

[2] N. Χατζη-Ζωγίδου, Θεσσαλικὰ Ζητήματα. Αθηνα X. 1898. pp. 541–55. I have seen this loom in Athens and also in Mitylene at the village of Iasso.

[3] Dalman, *Arbeit und Sitte in Palästina*, V.

[4] A simple method of bringing the work down is used by the Navaho Indians on their type of vertical loom, which also has no revolving beam. They let down the upper beam, make a fold in the loosened web, and sew it tightly to the lower beam. *Navaho Weaving*, C. A. Amsden, p. 42.

[5] Dalman, *op. cit.* pp. 107–112.

[6] They were " woven upwards by those standing." See Festus. *Pauli Exc.* 286–89. Quoted by Lillian M. Wilson, *op. cit.* pp. 21 and 57.

[7] Servius. *Ad Aen.* VII 14.

[8] Olavius, *Oeconomische Reise durch Island*, 1787, translated from the Danish edition of 1780.

[9] See *Bulletin. Met. Mus. New York*, Dec. 1931, p. 291; March 1932, pp. 70 ff. For vase, showing another part of scene, see G. Richter, *Shapes and Names of Athenian Vases*, Fig. 93, Type II.

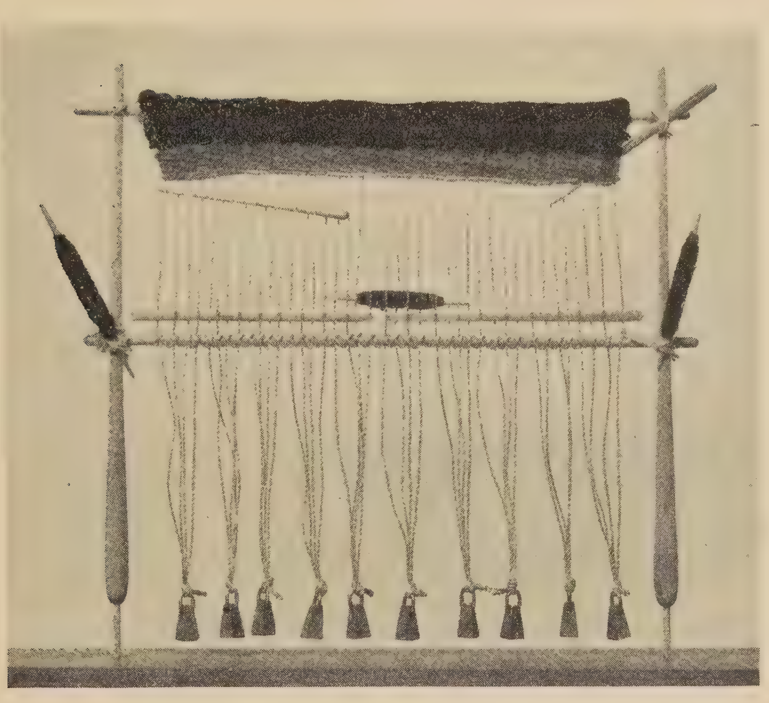

FIG. 3.—MODEL OF THE LOOM ON THE LEKYTHOS (PLATE 6).
Reconstruction by Miss Harriet Faxon.
(*By courtesy of the Metropolitan Museum, New York*).

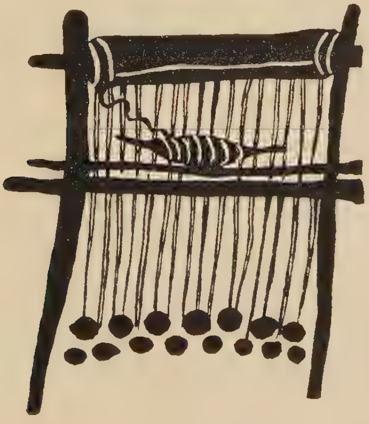

FIG. 4.—CIRCE LOOM FROM A BOEOTIAN SKYPHOS IN THE ASHMOLEAN MUSEUM, OXFORD (VAN BRANTEGHEM COLL.).

See H. B. Walters, ‘ Odysseus and Kirke,’ *JHS*, 1892–3, XIII, p. 8.

importance; it is, so far as I know, the only scene showing women at work on the loom.

The loom shown on this vase forms part of a scene where the preparing of wool, spinning, and folding of finished pieces of material are also depicted. On the side of the vase which is shown on Pl. 6, a woman on the right is weighing wool in a balance, while one on the left is making a rove and piling it in a basket. In the centre is seen the warp-weighted loom with two women at work. The weaver on the left stands in what we may believe to be the characteristic attitude, with arm raised beating the weft into place with what appears to be a pointed rod, for it is too slender to be a sword beater. On the right the second weaver is represented in the relaxed attitude of one who has just done her share of the work, which, we may take it, was the opening of the shed for the passing of the weft, because her hands are still resting on the upper shed rod.

The spool of weft—a stick with wool wound round it, sometimes called the stick shuttle—is stuck in the warp above the upper shed rod, ready to the hand when required for the next pick. This position for a spool is seen also on the Circe loom in the Ashmolean Museum (Fig. 4) where the weft runs down from web to spool.[1]

The loom itself, with one upper beam and two side beams, resembles other looms on vases in this respect, except Penelope's loom on an Athenian skyphos at Chiusi (fifth cent.)[2] which has two upper beams, one for stability, the other for the warp. The spindle shape of the side beams is paralleled only on Penelope's loom. The cross ties lashing the side beams to the upper beam are only given clearly on one other loom, that on a hydria from Vari in Attica (*c.* 430 B.C.).[3]

No support is seen on the lekythos loom, but the loom on the hydria shows stays at the sides, as does also a loom on a skyphos from the Kabeiric sanctuary at Thebes;[4] though all the looms are depicted as upright, they probably stood at a slight slant.

Two rods are seen across the loom,[5] the upper is free, the lower, which is the stouter, is lashed to the side beams and has cross ties along it over the warp threads. The latter appear to be all on one side of the rod and the weights below hang all on the same level. This, if accurately drawn, would indicate that the crossing was not kept, the function of the lower rod being merely to keep the warps in order, while the sheds were obtained by darning and opening with the upper shed rod. On other vase paintings, *e.g.*, the Circe looms at the British Museum and the Ashmolean Museum, Oxford (Fig. 4), and on Penelope's loom two rods are shown but the weights hang at different levels in alternate rows. This would indicate that the crossing was kept between the rods, the weights being on bunches of odd and even threads alternately, as on the Northern looms. In the Circe looms one of the rods may be a rod heddle, but as they are only seen as thick lines of paint drawn summarily across the warp this cannot be certain; in the lekythos loom, on the other hand, both must be regarded as shed rods, for a painter who could render details with such delicacy would have had no difficulty in indicating a rod heddle if he had seen one there.

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[1] See Ling Roth, *op. cit.* p. 40, Fig. 38, for hand of Penelope holding a spool, on a relief from Gomphoi.

[2] See B.M. Guide, *Greek and Roman Life*, Fig. 151: for photograph see Lillian M. Wilson, *op. cit.* Pl. V.

[3] See *Corpus Vasorum Antiquorum*, Robinson collection, fasc. 2, III. I. Pl. XLIII, pp. 31, 32. This red-figured hydria shows a charming domestic scene of mother, nurse and babe, with a small loom beside them. The loom has one shed rod lashed to the side beams, and a roll of cloth at the top with a pattern on it very similar to that shown on the dress of the nurse. Ten small loom weights are said to hang from the loom, but these cannot be well made out on the illustration.

[4] *Corpus Vasorum Antiquorum*, Robinson collection, fasc. 1. III G. Pl. XVIII. 2a. Scene probably represents Circe and Odysseus.

[5] I am taking the upper line across the loom as one long rod in spite of the break in the line, but if there were two short rods, as in the reconstruction, Fig. 3, it would make no great difference to the shedding.

Evidence for the use of a heddle has been found in the passage in Homer where the weaver is referred to as drawing the weaving rod (κανών) to her breast as she makes a pick with the spool (πηνίον): [1] that is the action of the rod heddle on the warp-weighted loom, which has to be drawn forward to make a shed.[2] But so also has the shed rod when there is no rod heddle.

The Greeks may have had the rod heddle—I think that it is probable that they did—but it is not proved by the scenes on the vase paintings. The reason may be that they all show tapestry weave, as is suggested by the widely spaced warp, and, more certainly, by the pictures—*e.g.*, the winged horses and griffins on the Penelope vase at Chiusi—" Bilder für Wirkerei, Rapportmuster für Weberei " as the German saying goes. The absence of a heddle is not a serious matter in this context. There are English tapestry weavers to-day who ignore heddles and prefer to use their fingers. One of the Northern looms at the Heiberg Museum also has only two shed rods: the others all show a rod heddle: Olafsson's Icelandic loom has three heddles and two shed rods as well, being evidently set up for twill.

The weights on the lekythos loom are beautifully shown, each with its bunch of warps tied into a ring. A warp weight with the ring still in position is in the British Museum (No. 95), with the figure of a spinner incised on one side of the weight. The shape of the weights is familiar to excavators on Hellenistic sites, a truncated pyramid. Out of 793 loom weights found at Olynthus, 208 in terracotta were of this shape; among the other shapes Miss L. Wilson describes a few that were mere lumps of clay pressed into shape by hand, which are regarded by her as the type shown by roundish spots of paint on the Circe vases.[3]

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[1] *Il.* 23, 761.

[2] For shedding diagrams see Fig. 2.

[3] Robinson, *Excavations at Olynthus*, Part II, p. 119.

The warp on the loom has 40 threads tied in bunches of four to the rings on ten weights, as shown in the reconstruction, Fig. 2, a small number for so large a loom, even if, as seems certain, the weave is intended for tapestry weave. The cloth at the top is raised slightly above the warp beam, but does not suggest a roll of cloth so definitely as the roll on Fig. 4 with its strongly curved lines at either side, or the decorated roll on the Penelope loom (Chiusi). These are usually taken to prove that this loom had a revolving warp beam, a great asset, as by this means the web could be drawn up to keep the work within easy reach of the weaver's hands. Further, the roll, being sometimes shown while the warp weights are close to the ground, gives reason for thinking that a longer fabric could be woven than the length from warp beam to warp weights, although there is no clue as to how this was done. Fortunately we have some evidence from the Northern looms, which were provided with a simple type of revolving beam.[1] Olafsson's text tells us how the upper beam can be turned round ' to lengthen the warp when the weft descends and it becomes short ', and his picture shows the ' yet unwoven warp ' appearing at the side of the loom and draped over the top of it. I imagine that the weights had to be taken off and re-tied farther along the warp when this became necessary, but he does not give this detail.

I hope that this discussion of the warp-weighted loom and its parts may throw a clearer light on the terms which occur in the literature. Some of the names are already certain enough, others are still uncertain and they do not all belong to the same period. A full discussion cannot be given here for lack of space and scholarship, but I propose to place the names as best I may from the weaver's point of view, and hope that other students may be stimulated to elucidate them further.

The term which causes most difficulty is the term κερκίς which is often rendered ' shuttle ', though Liddell and Scott gives ' rod ' or ' comb '. I suggest that it is to be identified with the pin beater, and that this is the slender rod with which the weaver on the lekythos is beating up the weft.

The pin beater is a well-known tool among primitive weavers.[2] I know it chiefly in the form of the gazelle horn, but I have also seen a straight wooden pin used, and, in Palestine, an iron pin, slightly hooked, which is evidently a substitute for the curved horn. On a vertical loom at Hama in Syria I have seen a weaver who beat up with a sword beater and an exceedingly heavy metal-toothed comb, and kept as well a polished wooden pin handy to deal with any thread that still proved refractory. A similar tool seems to have been used on the Northern looms as well as the sword beater: on Olafsson's loom, for instance, a curved pin is seen stuck into the web, and the text describes it as ‘a sharp bone or tough piece of wood which is used to beat the weft into proper position’ (Ling Roth's translation). This is the tool with which I propose to identify the κερκίς.

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[1] For discussion of warping on Scandinavian looms see C. Broholm and Margarethe Hald, *Danske Bronzealders Dragter*, 1935.

[2] M. Lois Kissell, *Yarn and Cloth Making*, p. 105. ' The short bodkin, or slender pointed stick, was an early tool for packing fine weft, especially in pattern making. It is thrust between the warp strands, which drives home in a better way than do the fingers.'

We gather from the literature that as a weaving tool it was held in the hand;[1] it was made of wood;[2] or of reed,[3] or of gold, if used by goddesses;[4] it was pointed;[5] it made a sound;[6] according to the poets it sang,[7] with a sound like that of chanting;[8] was a lover of song;[9] had a voice like that of the early twittering swallows,[10] or even like that of the nightingale;[11] and it moved swiftly, it was the ‘dancing girl of the loom’.[12]

A pin beater can be made of wood, or of reed, or even of gold; it is held in the hand; it can be run rapidly along the threads and the soft succession of plucking sounds so made must have been to the Greeks as characteristic of weaving as is to us the rhythmic thud of the batten. We should not call this ‘singing’, but if we were to attempt what Donald Tovey called ‘probably the most violent piece of gymnastics in all artistic experience’ and ‘think away our harmonic preconceptions’ we might imagine that in the ‘flatland’ of Greek music, where the compass of the scale was no more than that of the speaking voice, the κερκίς truly did ‘sing’. Further, the action of a pin beater is like that of a person plucking the strings of a lyre with a plectrum, and a poet might well describe the ‘note’ so given as musical. This is suggested in the passage where it is likened to the nightingale, which, if translated literally, reads: ‘The well wrought κερκίς, nightingale of the wool workers, with which Bauchylis divided the well struck threads’.[13] The word ‘divided’ agrees exactly with the action of the pin which does divide the warp threads as it is thrust between them, and the word for ‘well struck’ εὐκρέκτους, may have been connected with the root of κερκίς either in fact or in the imagination of the poet.

In the Cratylus of Plato we learn that there were different varieties of shape and quality in the κερκίς adapted to its use on different kinds of weaving, whether of flax or wool or other material, and that the good carpenter knew what wood to choose for each. Alas that Plato did not give us a description of its ‘true form’. We cannot be sure that the shape is given exactly by the rod in the hand of the weaver on our lekythos: I had imagined it myself as small and perhaps slightly curved, but as depicted here it is over two feet long and quite straight.

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[1] Because it fell from the hand of Hector's wife. See *Il.* 22, 448.

[2] Plat. *Cratyl.* 389.

[3] Hesych. *S.V.* κερκίδας.

[4] *E.g.* by Calypso, *Od.* 5, 62.

[5] Eyes were put out by the points of these tools in the legend. Soph. *Antig.* 976. Also Apollod. II 8. *Geopon.* XII 29, 3.

[6] Soph. *Fr.* 522.

[7] Arist. *Ran.* 1315.

[8] Soph. *Fr.* 909.

[9] *Anth. P.* VI 47, 1: 174, 11.

[10] *Anth. P.* VI. 247, 1.

[11] *Anth. P.* VI 174, 11.

[12] *Anth. P.* VI 288, 4.

[13] *Anth. P.* 174, 11.

The pattern is laid up in heaven, but there is now no craftsman on the earth who can make this tool so beautifully that we can say of the conception in his mind as Plato could: ‘ Might that not justly be called the true or ideal κερκίς? ’ [1] οὐκοὺν ἐκεῖνο δικαιότατ᾽ ἂν αὐτὸ ὃ ἔστι κερκὶς καλέσαιμεν ;

About most of the other terms there is little difficulty; they are as follows:

The loom, ἱστός.[2]

The upper beam, ἀντίον.[3] This designation is confirmed by the use of the same word on the modern Greek vertical loom for the upper and lower beam.

The sidebeams, κελέοντες,[4] ἱστόποδες.[5]

The warp weights, ἄγνυθες [6], λαῖαι.[7]

The upper shed rod, or the rod heddle, κανών [8]. The use of the word *kanūn* for the rod heddle on the vertical loom by weavers at Hama in Syria confirms an already accepted designation.

The lower shed rod, also κανών. This is probable as the lexicographers use the word in the plural. The word καῖρος [9] may have been the name for the type of shed rod shown on the lekythos loom with its well-ordered warp threads.

The spool, πηνίον.[10]

Weft, κρόκη,[11] weft on the spool, πήνισμα.[12]

Warp, στήμων.[13]

The sword beater, σπάθη.[14] This is not recognisable on any weaving scene, but the meaning of the word is certain. Sword beaters are usually made of wood and shaped like a large paper knife; the Northern one was rather paddle-shaped and sometimes made of bone.

The pin beater. κερκίς.[15]

One last question. Why has the warp-weighted loom vanished when other primitive contraptions have survived? Was it technically inferior to the other two looms mentioned? All three are handlooms, and the feet play no part in the work. In all three the course of evolution can be imagined as similar—finger weaving at first, later a shed rod, then the rod heddle and the shed rod, later still occasional multiplication of heddles. Varieties of weave and pattern, mostly no doubt in tapestry weave, were as freely executed on the warp-weighted loom as on the others, indeed, as far as the use of several heddles is concerned, the loom of Scandinavia seems to have been in advance of them, for twills appear earlier among textiles found there than they do in Egypt.

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[1] Plat. *Cratyl.* 389. Unfortunately I have so far found no interpretation of the earlier passage, 388, where the function of the tool is mentioned. Jowett's translation does not seem to make sense.

[2] *Il.* 1 31; 6, 491; *Od.* 1 357; 5, 62; Hes. *Op.* 777, etc.

[3] Ar. *Thesm.* 822. Poll. 10, 125.

[4] *Anth. P.* VII 424. Poll. 7, 36.

[5] *Anth. P.* VII 424. Poll. 7, 36.

[6] Plut. 2, 156. B. Poll. 7, 36.

[7] Arist. *G.A.* I 4, 6; 5, 7, 18.

[8] *Il.* 23, 761; Ar. *Thesm.* 822.

[9] Poll. 7, 33; Hesych. 2.

[10] *Il.* 23, 762: Hesych. I c.

[11] Hes. *Op.* 536; *Anth. P.* VI 335; Hes. I c.

[12] *Anth. P.* VI, 283; Ar. *Ran.* 1315.

[13] Hes. *Op.* 536; Plat. *Polit.* 281 A; 282 D; *Crat.* 388.

[14] Aesch. *Cho.* 232; Plat. *Lys.* 208 D.

[15] Plat. *Lys.* 208 D; and refs. already given.

Were the warp weights in any way inadequate? No doubt higher and more even tension can be put on a warp by a beam than by weights, but here our comparison has to be made with beams that do not revolve, and over these the weights have one great advantage, namely, power to control tension. I expect they were tricky to use but capable of fine results.

What then was the matter with the loom? I hazard a guess that the weak point was the position of the weaver, who had to stand at her work. If the loom was broad, too, she would have to move from one end of it to the other and back again, as Homer makes Achilles say that Briseis would have to do in his house on Argos,[1] or as he describes the nymph Calypso —singing with a sweet voice as she fared to and fro before the loom.' [2]

Artemidorus in his interpretation of Dreams, says that the dream of 'the upright loom' (ἱστὸς ὄρθιος) foretells movement and a journey, for when a woman weaves at this loom she must walk to and fro. To dream of the other loom means rest, since women sit down to weave at that kind of loom.[3] The 'other loom' may have been any of the other looms of the period. Perhaps we may exclude the horizontal ground loom, since sitting on the ground has its own discomforts; probably it was the other vertical loom, unless, as has been suggested, the horizontal treadle loom had already appeared in that part of the world.[4] In either case, we can imagine how gratefully Greek and Roman women would welcome a more restful position; one that would not call forth that often heard complaint, 'I've been on my feet from morning till night.'

My grateful thanks are due to the Metropolitan Museum, New York, for permission to publish the photographs on Plate 6 and Fig. 3; to M. Hald for permission to reproduce the diagram of the Northern loom on Fig. 1*a*; and to my daughter Elisabeth for the drawings in ink.

GRACE M. CROWFOOT.

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[1] *Il.* I 31. [2] *Od.* 5, 62. [3] Artemidorus, *Oneiros.* III 6.

[4] Artemidorus lived in Lydia, in Asia Minor, about 160 A.D. Much was happening in the textile world in those days, and all sorts of new techniques were being tried out, but the exact moment of the appearance of the treadle loom is not yet certain. Here is yet another fascinating problem awaiting solution.

THE PROCESS OF TRADITION IN GREECE

THE word ‘ tradition ’, used to mean either the process of oral transmission or the story so transmitted, may cover two things: the oral relation from man to man of real events with the possible value of such traditions for history, and this amounts to the study of what is called folk-memory, or the transmission of legends dealing with such supernatural happenings as no one is likely to regard as true. This paper deals exclusively with the latter.

We read and are taught from our childhood legends of the gods and heroes of Greek and Roman mythology, to say nothing of the legends of our own northland. These legends are set down in books, but it is reasonable to ask what relation these written stories bear to what in earlier ages was actually told and more or less believed by people in different parts of the country concerned and at different periods. How far was a legend always told in the form in which we happen to find it recorded? We are, I believe, too prone to look upon a legend as having been always a fixed and so to say canonical story, although we have in fact no lack of hints that legends admit of the widest variations. As an example we may take the story of Theseus as told in the sixteenth dithyramb of Bacchylides. Theseus went to Crete to convey the tribute of youths and maidens to Minos. Minos quarrelled with him and challenged him by throwing a ring into the sea and defying him to dive and bring it back from the sea realm of Amphitrite. Theseus dived; Amphitrite recognised her son; gave him a wreath; and he came up again from the sea: of the ring the poet says nothing more. The legend is also depicted on several painted Attic vases, but the ring does not appear. Theseus is shown going down to the realm of Amphitrite, who gives him a wreath, and, though the legend is found on a number of vases, there is no sign of Minos or of the challenge. We see, therefore, that the legend has been told in two ways; one has been chosen by the poet, another by the painter. Of such variants and inconsistencies in the records of classical legends there is in fact no lack, but it is not easy to find an example with such a catena of appearances as we can find for a legend which I heard when I was at the monastery on Mount Sinai in the spring of 1938, and an examination of this story will perhaps throw some light on the general question of the transmission of legendary narrations.

Here then is the story. It relates to a small chapel of the Virgin quite near the monastery, which Justinian built in honour of St. Katherine in a narrow valley in the Sinai mountains, to commemorate the place at which by tradition Moses beheld the Burning Bush. Near the monastery are two peaks; the higher, the extreme summit of the whole range, is that of St. Katherine, where the bones of the saint lay until the monks brought them down to the monastery; the other, very much lower, is the Mount of Moses, on which tradition says that Moses was given the tablets of the Law. The Mount of Moses is ascended by a path which leads up from the monastery to a narrow cleft in the sheer side of the mountain; presently the pilgrim reaches the beginning of the famous and very ancient steps which lead him right up to the very summit, the Holy Peak. The steps first go by a spring of water and a few poplars: the water flowed from the rock—so the story goes—at the prayer of a pious shoemaker; it is therefore called the Spring of the Cobbler. Another version—and we see the variability of legend—attributes the water to the prayer of some unnamed holy man. Ogier de l'Anglure, one of the pilgrims who has left an account of his visit, confuses this with quite a different site, and asserts that it was here that Moses struck the rock, and water flowed to satisfy the thirsty multitudes of Israel. Presently the monastery passes out of sight, and at a turn in the path there is a little platform of rock and on it a small chapel of the Virgin. This is the chapel of the legend, of which the monk who was my guide at once told me the current version.

In early days the monks suffered from lack of food; they were also notably troubled by fleas and other vermin. They determined to leave the monastery, but before going they would make a last ascent to worship on the Mount of Moses. As they were going up, the steward, on whom the responsibility fell of providing for the bodily needs of the brethren, dropped behind a little. At this point in the path, the Virgin appeared to him and forbade the monks to desert the monastery; she would extend to them her special protection and through the power granted her by God their troubles would cease. The steward gave the monks the good news; they returned to the monastery, and provision as by a miracle was made for all their needs. To commemorate the event this chapel called ‘ Of the Virgin of the Steward ’, τῆς Παναγίας τοῦ Οἰκονόμου, was built. Such is the story, and I find it recorded in one form or another by almost every pilgrim who has left a record of his visit to Sinai. The catena of passages begins with the twelfth and goes down to the seventeenth century.

My first notice, though not mentioning the chapel, is yet relevant. Peter Tudebove, a twelfth-century historian of the Crusades, says that in the monastery there is a big jar which never fails to be full of oil. Next Thietmar, another writer on the Crusades who was at Sinai in 1217, says that the monks were troubled with fleas; they intended to leave the monastery and went up the Mountain of Moses to leave the keys in the guardianship of the holy place. Where the chapel now is, they met the

Virgin, who ordered them to return, and all would be well. At another time there was no oil for the church lamps; again the monks determined to leave and again were prevented by the vision. The Virgin told them that this jar would always be full of oil, however much was drawn from it. And after this second apparition the chapel was built.[1]

It seems therefore at this stage that there were two stories: the Virgin gave them relief from vermin and an unfailing supply of oil. Later versions always mention the vermin, adding that the monks were granted the needful supply of food; the special mention of oil drops out of the story.

The next account is that of Thomas de Swinburne in 1332; he says that the troubles of the monks were from vermin and lack of food; nothing is said of oil for the lamps. He calls the chapel *Beatae Mariae Pelagiae*, a name to which I refer presently.

But at the very time of Swinburne there was another explanation for the freedom of the monks from vermin, which says nothing of the attempt to leave the monastery or of the vision and the chapel. William of Baldinsel, also in 1332, simply says that there were no fleas or flies there as the result of the prayer of a holy man much troubled by such creatures. If visitors brought them in, they promptly died in the hallowed enclosure.[2] The same story is told by Ludolph von Suchen in 1530.[3]

Our next witness is the book of Sir John Mandeville, a collection of stories of course without any personal authority.[4] There was, we are told, a chapel of the Virgin marking the place where the faint-hearted monks, tormented by vermin, had been commanded not to leave the monastery. In one form or another the story was locally current in the first half of the fourteenth century.

About the same time, in 1335, the Augustinian monk, James of Verona, was at Sinai.[5] The monks were plagued by hunger and vermin, but the Virgin appeared and told them not to leave the monastery. Presently a youth appeared by the side of the Virgin, and she told him to guide the monks back to the monastery. Arrived there, he told them that all would be well; he was the prophet Moses. This version adds two points of interest. It introduces Moses, the great prophet of Sinai, though very oddly as a youth. Next he was to guide them on their way back. But why, we must ask, did the monks need a guide for a short and very familiar walk of less than half an hour? The explanation will appear when we come to the account given us by Pero Tafur.

[1] Relevant passages are quoted in Palestine Pilgrims' Text Soc., *Anonymous Pilgrims*, I–VIII (1894), p. 3: Tudebove, ed. De Vogüé, p. 414, and Thietmar, ed. J. C. M. Laurent, c. XXII (not VIII) and XXIII.

[2] Gulielmi de Baldinsel, *Hodoeporicon ad Terram Sanctam*, in Canisii, *Lectiones Antiquae* IV p. 344.

[3] Palestine Pilgrims' Text Soc. edition, p. 87.

[4] Early English Text Soc.'s edition (1919), p. 40.

[5] *Rev. de l'orient latin* III (1895) p. 232.

Nine years later, in 1346, Rudolph de Frameyus mentions what seems to be the chapel, but says nothing of the legend.[1]

In 1387 we again hear of Moses, but in rather a different way.[2] The Florentine, Niccolo Frescobaldi, on his way up the Mountain of Moses came to the chapel, which he calls *Santa Maria della Pagaria ;* Saint Mary, that is, of the Guarantee, of the Assurance, a name which exactly fits the story, but which I find elsewhere only in Swinburne, when he calls the chapel *Beatae Mariae Pelagiae*, where I am sure that *Pelagiae* is a mere error for *Pagariae*. St. Pelagia has no connection at all with the place or the legend. Frescobaldi then tells the usual story: the monks lacked food—by exception he says nothing of vermin—and were about to go away, when the Virgin appeared and sent them back. At the monastery they found a whole cavalcade of camels loaded with provisions, and with them a boy, who said that a strange old man in Cairo had bought the food and arranged for its transport. The boy at once identified a picture of Moses as the old man, and was so much impressed that he wanted to become a Christian. But the camel-drivers were Saracens, and they turned on him and killed him, cutting his body into four pieces. The chapel was of course built in memory of the event.

In 1394 the Italian notary Martoni was at Sinai.[3] He tells the story in its barest form: the vision of the Virgin and the return to the monastery. With one notable variant: the trouble of the monks was neither hunger nor vermin; they were being driven out by the attacks of the Saracens, the Arabs of Sinai, who were often very troublesome to visitors, and to whom the monks even now give a dole of bread not clearly to be distinguished from blackmail.

Ogier de l'Anglure gives the story in outline in 1395.[4] In 1421 Ghillibert de Lannoy does not mention it, and the next version is that of Pero Tafur in 1436, which differs a good deal from the usual type.[5] The supernatural helper is not the Virgin, but St. Katherine, and the story is put at a date earlier than the building of the monastery; in fact it appears as a foundation legend. On the summit of the Mountain of St. Katherine, the higher of the two peaks, there was, Tafur says, in old days a monastery, and in it the body of St. Katherine was preserved. Here the monks lived, guarding the body. But there was such a lack of water, and food was so hard to come by, and the peak was so very cold, that the monks found life there intolerable. Nothing is said of vermin or lack of oil. They therefore went away, leaving the body unguarded, and went to Cairo, here called

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[1] In Canisii, *Lectiones Antiquae* VI.

[2] *Viaggio de Frescobaldi*, Roma, 1818, p. 122.

[3] *Rev. de l'orient latin*, III (1895) p. 608.

[4] Edition of Soc. d. anc. textes Français, 1878, p. 49.

[5] *Andanças e Viajes*, 1874, p. 92. In Letts' translation, p. 82.

Babylonia, where in fact there is still a house belonging to the monastery. But St. Katherine appeared to them and told them to go back to Sinai; in a certain place they would find a great heap of wheat on the rock, and here they were to build their monastery, and presumably to it they were to remove the body of the saint. Of the chapel usually associated with the intended desertion there is no mention at all.

There is at present a chapel on the Mountain of St. Katherine, but most of the pilgrims report that there was no building on it at all; merely the miraculously made hollow in the rock where the body of the Saint had rested, brought there by angels and guarded by them until the monks in the already built monastery of Justinian were guided by a strange light to bring it down to the monastery where it now reposes. This version of Tafur's, by which the story becomes a foundation legend, explains why in the earlier account of James of Verona we are told that the monks needed someone to guide them to the monastery: they were really being guided to a new site.

About 1480 the German Dominican, Felix Fabri, was at Sinai.[1] The monks, he writes, had been much troubled by serpents, toads and such creatures; nor had they enough to eat. They were making a farewell procession up the Mount of Moses, when at the place of the chapel the Virgin appeared and told them to persevere. As a sign, a spring of water burst from the rock. The monks duly returned, and found the monastery clear of all reptiles; if a snake so much as approached the walls, it died immediately. The sign of the water-spring is an incident common in hagiography: I do not remember that there is in fact any spring at the place.

Then in 1530 a Franciscan friar, Father Noe, was on pilgrimage.[2] The monks, he says, were pestered by rats and vermin; they were leaving the monastery, but at the place of the chapel, St. Maria dell' Apparizione, they saw the Virgin and with her St. Katherine; the saints told them to return and all would be well. At the gate of the monastery they found a caravan of camels loaded with all the necessities of life. They unloaded it, and immediately the camels and their attendants vanished.

In the seventeenth century I find only Gabriel Bremond, who tells the story in 1644, but in the barest outlines. He mentions lack of food and the pest of vermin.[3]

The pilgrims now fail us, but in 1758 we have the first edition of the Ἐπιτομὴ τῆς Ἱεροκοσμικῆς Ἱστορίας, written by the Cretan monk Nektarios, who was Patriarch of Jerusalem. In spite of its name, the greater part of the book is devoted to an excellent account of the monastery of Sinai. Nektarios tells the story much as it is told to-day, mentioning both the vermin and the lack of food. The authority of this book, of which there are at least three editions, has done much to fix the form of the story.

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[1] In Stuttgart 1849 edition III p. 453. In Palestine Pilgrim's Text Soc.'s translation II p. 551.

[2] *Viaggio da Venezia*, by R. P. Fra Noe. Lucca, *c.* 1620.

[3] *Viaggi*, Roma, 1679, p. 143.

From this catena of versions we may distinguish what may be called the core of the story: the monks found living in so desert a place difficult and unpleasant; they would have gone away, but that the Virgin in a vision, localised at the site of the chapel, told them to endure, and by her help all would be well. We may conjecture that the source of the legend is that the monks in their troubles were comforted by an assurance of divine help, conveyed perhaps to one of them in a dream. To this core all sorts of variations were added. In so cold a region vermin can never have been very troublesome, but freedom from them needed, or rather welcomed, some pious explanation. For this there was also the rival story of William of Baldensel and Ludolph von Suchen, that vermin were done away with at the prayer of some very holy man, just as after the prayers of St. Patrick there were no more snakes in Ireland.

The legend has other variants. Pero Tafur and to some extent James of Verona make it a foundation legend: earlier the monks had lived on the peak of St. Katherine. It is probably a fact that in the earliest days they lived in the scattered hermitages that are still to be found among the hills. But the great majority of accounts refer the event to the later period after the building of the monastery. Again, while the help is as a rule from the Virgin, one version substitutes for her St. Katherine, the local saint, another mentions them both, and others introduce Moses, the special holy man of Sinai. From the beginning the monks' troubles vary. There is at first a lack of oil, remedied by the miraculous jar. Later the food difficulty is to the fore. The plague of vermin lasts right through the series. One account is quite by itself in making the Saracens the cause of trouble. The core of the legend is always the prevention of the monks from deserting the sacred place.

To most of the incidents there are parallels elsewhere. The miraculous oil-jar repeatedly occurs on Mount Athos. The attempted desertion is an incident also in the life of St. Athanasios the Athonite. The saint was building his monastery, the Great Lavra, on Mount Athos—the date is late in the tenth century—and he was discouraged by the lack of every necessity, workmen, materials, money, food; all alike were lacking. He was leaving the place in despair, when on the road he met a woman; she told him to remain and all would be well. Then she gave him a sign, the same sign as was given to the steward in one version of the Sinai story; a copious stream flowed from the rock. Athanasios went back and all was well. We reach the general idea of a supernatural helper for monks who choose to live or work in a place where the natural means of subsistence are lacking.

To the question, ‘How did they get the means of existence?’ the answer is given that it was by the aid of the saintly protector of the brotherhood.

If we had found one and one only of these versions, we might be tempted to make what this multiplicity of versions shows us is a great error in method, and to suppose it as at least likely that a story, essentially no doubt one, has always been told in exactly the same way. And this is an error to which we are particularly prone when we consider the legends of classical antiquity as they are presented to us in sources whose scanty nature we are very apt to ignore.

From this Sinai legend we may infer the fluidity of tradition; the many versions of what is fundamentally one and the same story. To this extreme mobility however there seems to have been always one great check: that a legend should find its way into a written book. A written version has a tendency to acquire what we may call canonical orthodoxy, and the more the book is read and respected the more it tends to kill the living and shifting oral tradition. This fixed orthodoxy may begin very soon in the life of a story. The early cosmological legends of the Jews got into the inspired text of Genesis; ever since then, wherever Genesis has been read as a holy book, the legends have had their fixed form. In ancient Mesopotamia the Flood may have been recounted in other versions; wherever it is known in Europe it is in the story of the escape of Noah and his family, of the ark and of the dove. This is perhaps an extreme case; generally tradition goes its way, checked every now and again by some written record. And here we have a piece of evidence from Ancient Greece. Herodotos writes that Homer and Hesiod made, or set down, for the Greeks the genealogies of the gods, their names, their honours, the arts they aided and the forms they assumed.[1] It was the same authoritative poets, says Xenophanes in a fragment, who made all the attributes of the gods, ascribing to them many things which among men are shameful and worthy of blame.[2] These passages to me mean that the Greeks held that the poets chose the forms of legends that they liked best and put them into their poems, henceforth to have the authority of the poets, and to force out of the field any rival versions of the oral transmission. Not that all variations and inconsistencies could ever disappear entirely. Even of the Tale of Troy we have considerable traces of non-Homeric accounts.

Another and later writer who had at least the idea of the rôle to be played by the poet was Plato, who would have no immoral stories told of the blessed gods; they did not tally with his idea of the rulers of the world. If the philosopher had proceeded to reshape the religion of the Greeks, as he thought he had a right to do, we should have heard very little of such stories as how Hephaistos caught Aphrodite and her lover in his cunning snare, and exposed them, not to the anger and scorn, but to the half shamefaced amusement of the goddesses and the unquenchable laughter of the immortal gods.

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[1] Herodotus, 2, 53.

[2] In Diel’s *Poet. philos. Fragm.*, p. 39.

To return to the Sinai legend, Nektarios' eighteenth-century record has had very much this fixing quality; in earlier days when it had been set down only by passing pilgrims, the legend among the monks could shift and vary in its details, though remaining always with a central unity, in a way that is instructive when we have to consider those legends of Ancient Greece, and indeed of other countries, for whose descent we have not the same amount of sound documentary evidence.

R. M. DAWKINS.

AN IRON AGE PAINTED AMPHORA IN THE CYPRUS MUSEUM

Abbreviations Used in this Paper.

SCE = *The Swedish Cyprus Expedition.*
RDAC = *Report of the Department of Antiquities, Cyprus.*
PEQ = *Palestine Exploration Quarterly.*
QDAP = *Quarterly of the Department of Antiquities, Palestine.*
Jahrbuch = *Jahrbuch des Deutschen Archäologischen Instituts.*
Myres' *Handbook* = *Handbook of Cesnola Collection* by J. L. Myres.
Gjerstad, *Classification* = *Classification des Céramiques Antiques* (16), Union Académique Internationale, by E. Gjerstad.
Gjerstad, *Studies* = *Studies on Prehistoric Cyprus*, by E. Gjerstad.
Dussaud = *Les Civilisations Préhelléniques*, by R. Dussaud.
Nilsson = *The Minoan Mycenaean Religion*, by Martin P. Nilsson.
Contenau, *Glyptique* = *La Glyptique Syro-Hittite*, by G. Contenau.
Contenau, *Manuel* = *Manuel d'Archéologie Orientale*, by G. Contenau.
Schaeffer = *Missions en Chypre*, by Cl. F. A. Schaeffer.
Poulsen = *Der Orient und die Frühgriechische Kunst*, by Frederik Poulsen.
Kunze = *Kretische Bronzereliefs*, by E. Kunze.
Perrot et Chipiez = *Histoire de l'art dans l'Antiquité*, by G. Perrot et Ch. Chipiez.
Ohnefalsch-Richter = *Kypros, the Bible and Homer*, by M. Ohnefalsch-Richter.

THIS unique amphora (Plates 7 and 8) was recently presented to the Cyprus Museum by Wing-Commander O'Brien Hubbard of Kyrenia, who saved it from the hands of illicit diggers and dealers. It is with special pleasure that I am now publishing it in the volume of the *Annual of the British School at Athens* which appears in honour of Professor J. L. Myres, the founder of Cypriot Archaeology, to whom the Cyprus Museum in particular owes a debt of deep gratitude.

The place of origin of the Hubbard Amphora, as we may call it, remained for some time obscure. Great quantities of early Iron Age pottery, most of it of the type with painted birds and animals or with human figures, appeared in the market recently. This indicated illicit excavations on a rather large scale. The scene of operations was located in the eastern part of the island, and especially in the central part of the Famagusta district, including the villages of Gypsos, Peristerona-Piyi, Styllos or Stylli, Ayios Iacovos and Ayios Andronikos. After systematic search in all this area I was able to trace a great number of sites where recent looting had been carried out. The Hubbard amphora appears to have been discovered in the site Vartivounas, a cemetery in the neighbourhood of the Platani village (Fig. 1).

The area here described is not unknown to us. The Swedish Cyprus Expedition[1] carried out excavations in an Iron Age Cemetery belonging to the Cypro-Geometric and Cypro-Archaic times, a mile east of Stylli village. The same expedition carried out excavations near Ayios Iacovos in a cemetery dating from the Middle and Late Bronze Ages and in a Late Bronze Age sanctuary[2] which was exceptionally important and rich. Other sites have been reported recently, such as an archaic sanctuary between Ayios Iacovos and Mandres.[3] Now we have a rich harvest of Iron Age cemeteries partly looted by villagers who brought to light a fine series of vases which, as mentioned before, are elaborately ornamented with geometric design, human figures, animals, birds, lotus flowers, etc.

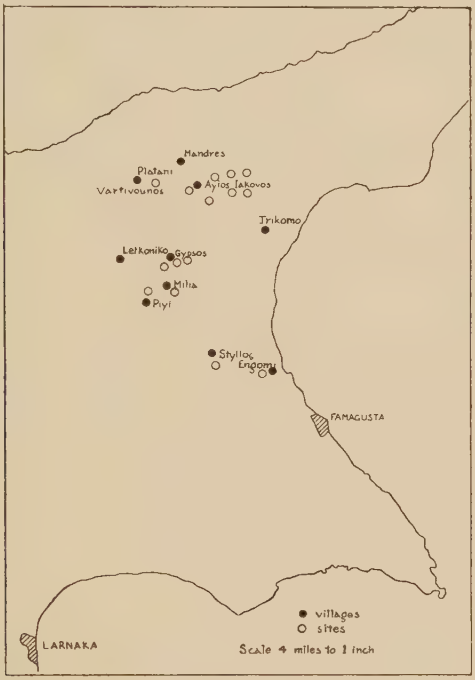
Mandres
Platani
Vartivounos
Ayios Iakovos
Trikomo
Lefkoniko
Gypsos
Milia
Piyi
Styllos
Engomi
FAMAGUSTA
LARNAKA
● villages
○ sites
Scale 4 miles to 1 inch

Fig. 1.

Myres,[4] in classifying the white-painted ware of the Iron Age, distinguishes three periods: (1) the early or transitional period with early forms bearing Cypro-Mycenaean and Pre-Mycenaean survivals dated to

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[1] *SCE*, vol. ii, pp. 142 ff.

[2] *Ibid.*, vol. i, pp. 302 ff.

[3] *RDAC*, 1935, p. 13.

[4] *Handbook*, pp. 63 ff.

1200–1000 B.C. (2) The middle or geometrical period during which the decoration is purely geometrical, dated to about 1000–750 B.C. (3) The late or graeco-phoenician period of mixed oriental influences. During this period the lotus flowers, birds and animals appear as part of the painted ornamentation. Moreover, vases with fully pictorial designs occur. This period is dated to about 750–500 B.C.

If we compare the Hubbard amphora to the different types of amphorae attributed by Myres to each of these periods we notice that it belongs neither to the early types, *i.e.* those included in the first period, *e.g. Handbook* No. 501, nor to the type (e) of period 2 which belongs to the class of vases with fully developed geometric decoration, *e.g. Handbook* No. 608. Our amphora belongs to an intermediate type with marked typological elements common to the period 1 and the early part of the second period. We would not then be far from truth if we attribute it to about 900 B.C.

Gjerstad [1] divides the Iron Age white ground pottery into two main classes; the white painted and the Bichrome and distinguishes seven types in each of these two classes. Our amphora possesses the stylistic elements which justify its attribution to type III of Bichrome ware.

If we compare our amphora to the example of Bichrome III ware illustrated on *SCE*, Vol. II, Pl. CIV 4 we notice that it possesses earlier typological elements. Thus the rim is more flaring and the outline of the body is nearer to that of earlier amphorae. This enables us to attribute it to an intermediate type between II and III *i.e.* to an earlier period than that during which type III is mostly favoured. The above-mentioned amphora on *SCE*, Pl. CIV 4, was found in the Iron Age cemetery of Stylli, Tomb 9 (*SCE* II, p. 160), which dates to the early part of Cypro-Geometric III, which chronologically means about the second half of the ninth century.[2] If we recall that our amphora represents an earlier type than the Stylli one, we are justified in attributing it to the early part of the ninth century, which is roughly the date reached through Myres' classification.

Gjerstad (*op. cit.*, p. 36) moreover thinks that in the late stage of the white-painted and Bichrome III ware the uniform style hitherto characteristic of the Cypriote Iron Age pottery begins to split up in two different styles: [3] the rectilinear style and the circle style. These two ornamental styles are fully developed and separate in type IV of the above-mentioned ones. The circle-style can be localised to the western and northern parts of Cyprus and the rectilinear style to the eastern and southern parts of the island. The eastern style now favours the non-geometrical ornaments, *i.e.*, lotus buds and flowers, rosettes, aquatic birds, quadrupeds and even human figures. The Hubbard amphora which, as explained before, belongs to a transitional stage between types II and III, was found in the eastern part of the island, and seems to shew the preference for other than geometrical design in that part of the island at a quite early period. This is moreover confirmed by the discovery of two more amphorae: (*a*) the Louvre example (*Mélanges Syriens*, pp. 435 ff., Pl. I), which, as will be explained later, appears to have come from the same part of Cyprus as the Hubbard amphora, and (*b*) by the Kaloriziki (near Curium) example (see below), which is even earlier than the Hubbard and Louvre amphorae.

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[1] *Classification* (16), pp. 27 ff.

[2] This date has been kindly given me by Dr. Gjerstad.

[3] Sir L. Woolley (*Antiquaries Journal*, XVII 1, p. 10) attributes the distinction of styles to an invasion of Cyprus at the beginning of the Iron Age by two kindred but distinct types whose original home was probably in Asia Minor. This is corroborated by two factors: (*a*) that the Iron Age pottery of Cyprus makes its appearance suddenly in the island, that it has little connection with any Bronze Age fabrics, and it is not descended from any of them through any transitional period; (*b*) the Tal Sheikh Yusuf (near Antioch) shews that the pottery of the mainland and of Cyprus are scarcely distinguishable, a fact which indicates the relation of the makers, but the makers on the Continent, as in Cyprus,

The body of our amphora is ovoid, tapering to a ring base. The neck is wide, with slightly concave sides, the rim is distinct and flat, somewhat turning downwards. Below it is a ridge in relief all round the neck. The handles are fixed on the shoulders and have knobs on the top. The ornamentation on the neck consists of two broad bands painted in black round the top and base of the neck. The space between is divided into panels by groups of vertical lines. The panels are either filled with geometrical ornamentation (cross-hatching, chessboard pattern arranged in triangular schemes, hatched triangles) or left plain, in which case free-hand concentric or dotted circles are drawn. The feature of the body decoration is a wide zone formed at the level of the handles by bands and decorated with a figured representation which will form the main subject in this paper.

The central part of the first zone is occupied by an enthroned lady (Plate 8*a*). The throne is very elaborate; the back curves out, the seat is hollow, and the space between the upper parts of the legs is filled with black paint, whilst the lower space is filled with geometrical ornamentation, some of which undoubtedly indicates wooden cross-pieces. The bust of the enthroned lady is drawn in outline and shewn nearly in the frontal position; the head is in profile and looks to the left. The middle part of the body is also indicated in outline, whilst the legs are filled with black paint. The feet rest on a square stool placed in front of the throne. A kind of drapery, probably meant to be transparent, covers the middle part

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are really not at home, and while level 8 is almost Cypriote in character, in levels 9 and 10, no ‘ Cypriote ’ pottery whatsoever was found. On this, however, see J. F. Daniel (*AJA*, XLI, 83 and XLII, 275), who thinks that the sub-Mycenaean style was thoroughly established in Cyprus years before the fall of Mycenae. It was a direct outgrowth of the pottery imported to Cyprus in the fourteenth and early thirteenth centuries, and evolved without interruption through the latest Mycenaean influence into the developed geometric style of the Early Iron Age.

of the body and projects in a broad panel in front of the legs.[1] The lower part of this drapery is filled with parallel lines, whilst the upper part was possibly filled with purplish paint which has now nearly disappeared. The bust is nude and the breasts are clearly indicated. The right hand is bent at the elbow and holds the end of what may be called a drinking-siphon, bent at right angles, and with the other end dipped in an oblong amphora set on a special stand. With the left hand the enthroned lady touches a small table on which appear three jugs, and in the interspaces two round objects, possibly bowls. On the left is a female figure engaged in pouring liquid into the jar in front of the enthroned lady, with a jug held in the left hand. She holds three more jugs in the right hand. This figure has the bust nude and wears a kind of skirt painted in dull brown colour. A band of similar colour is painted along the outline of the bust on the inside and fills the hands. The method used to represent this figure is approximately the same as that of the enthroned lady—*i.e.*, facing bust, head and lower part of body in profile, legs blackened.

On the left of the figure appears a protome of a bull incorporated in the painted decoration of the handle. Behind the throne is a winged, bearded sphinx with head and wing drawn in outline and body filled with black paint. The sphinx is smelling a flower held in the left raised foreleg.

In the second zone (Plate 8*b*) a group of five dancing figures holding hands and advancing to the right is represented. Four of the figures are similar to that appearing on the other zone engaged in pouring, whilst the central one, who holds a lyre in the left hand, is different. The hair is shorter and curls up at the base of the head. The body is represented in outline, and there is no indication of dress unless the dull purple paint which fills in the body to the knees is meant to represent a tight-fitting garment.

Male figures are similarly represented on figured vases of the Iron Age in Cyprus, but they usually have some indication of dress. Thus on the ‘ Bull-fighter Jug ’ in the Pitt-Rivers Museum [2] the human figure wears either a mere loin cloth over the hips or perhaps tight-fitting drawers. The latter, however, are usually worn in Cyprus statues with a tight-fitting vest with short sleeves.[3] This may be so in the case of the lyre-player, but it is remarkable that the bust is nude and that the breasts are indicated as on the female figures of the group. This might be considered as indicating that the lyre-player is female, but male figures on Cypriot pottery of this period have similar indication of breasts.[4] We may therefore assume that the lyre-player is a male figure, on account of the apparent difference in the dress and in the hair.[1]

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[1] Very thin or transparent costume is worn by female terracotta figurines of the Iron Age: see Myres, *Handbook*, no. 2140 and *SCE*, III, p. 596, pl. CCIII, 7–12.

[2] *Essays in Aegean Archaeology*, Pl. XIV.

[3] *Id.*, p. 82. Also Myres, *Handbook*, p. 156.

[4] *E.g.* the bull-fighter of the Pitt-Rivers vase, *id.*, Pl. XIV.

The four female figures wear skirts and have the bust nude. All have the breasts marked with the exception of the one on the extreme left, probably due to omission. They are shewn in outline, and the skirts are filled in either with dull red, dark brown or purple, or, in one case, with cross-hatching.

The busts are shown in the frontal position, the heads and lower parts of bodies in profile. The hair is represented by a thick mass bordering the outline of the head and falling on the shoulder.

As said before, this group of five figures represents a ring dance; they are holding hands, although the pot-painter never troubled to join the hands. Between them, but evidently meant to be held by them, appear branches, one of which—the first from the left—is most elaborate, and is treated like a group of small flags. The third one is exceptional in size, and looks like a very big flower; its petals are left in white or are filled in with dark purple colour or hatching.

If we look upon the style of the figures represented on these two zones, we are struck by the general lack of care in the drawing. The faces are rather grotesque, the noses resemble birds' beaks, and the chins project forward. The eyes are large, and in some cases their outline goes on to join the ears. The eyebrows are also exaggerated. There is no effort to represent rightly the proportions of the body, and the legs are clumsy; they appear to be like suspended legs from underneath bell-shaped figurines of the Iron Age such as are found in Cyprus.[2] Some of the legs appear to be disarticulated, and on others the muscles are indicated in the wrong parts. On the whole they appear as the work of an untrained artist with childish soul. Professor Myres[3] considers these unconventional paintings 'as the work of expert craftsmen deliberately discarding traditional modes of presentation in dealing with unconventional subjects; they are in fact experiments, aspirations after a free style expressive of the designer's own observation.' This is a natural inference if these grotesque paintings are compared with the fine drawings of birds, lotus-flowers, and the similar of the orientalising period in Cyprus. But in the case of our amphora the problem may be looked upon from another point of view. Our amphora belongs to the beginning of the ninth century, a period of rather poor production in Cyprus. After the invasion of the peoples of the seas, the destruction of the Mycenaean centres, and the great disturbances which occurred not only on the West but also in the East,[1] Cyprus was cut off from all sources of inspiration, Western and Eastern. The beginning of the Iron Age is characteristic of a production of pottery with dull and monotonous geometrical ornamentation. Our amphora belongs to a period previous to the great influx of oriental influences, and may naturally represent the first efforts of those pot-painters who had no tradition behind them or who had little familiarity with the human figure.

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[1] In fact the lyre-player of the Ayia-Triada sarcophagus, which will be brought into connection with the scenes on our amphora later on, is also male (Dussaud, p. 404).

[2] Myres, *Handbook*, p. 340. The Cyprus Museum possesses several examples of figurines, the body of which is bell-shaped and the legs are suspended from the inside, through holes in the side of the bell.

[3] *Essays in Aegean Archaeology*, p. 87.

Let us now turn to the interpretation of the scenes represented on our amphora. The first zone represents the adoration, which includes libation, of an enthroned lady. This lady may be a deity or a deceased woman considered as deified. The vase was intended for a tomb, and it is quite natural to suppose that the enthroned person represents the deceased, who, after death, was given the rites and honours of a deified human being. Such appears to be the case of the person in whose honour the ritual is carried out on the Ayia Triada sarcophagus.[2] In fact, the custom of deifying the dead appears to have come from Egypt,[3] and the relations of Cyprus with Egypt have been close since the early Bronze Age.

The woman in front of the enthroned deity carries jugs apparently full of liquid, which she pours into the jar from which the deity sucks the liquid through the siphon. Here we have a most important element showing the cultural relations of Cyprus with the East. The custom of using a siphon for drinking out of a jar appears on Syro-Hittite cylinders of the latter part of the second millennium B.C.,[4] representing the ‘Communion Scene.’ This consists of two persons facing each other and drinking through a kind of reed out of a jar placed between them. Contenau supposes that these persons are either deities or a deity and a worshipper taking part in a kind of banquet at which the food absorbed is liquid instead of solid as in other cases. On some examples there is only one person performing this rite, and the most typical version of the scene in the Syro-Hittite series is the one appearing on a cylinder in the British Museum,[5] and on another in the Morgan collection[6] (Fig. 2). There appears a seated person performing the rite in front of an altar on which stands the idol or a bull. Between the person and the altar appears a servant, who holds a vase in the hand. According to Contenau, the area where this custom is most prevalent is Syria. The same rite, however, appears on a stele dating from the XVIIIth Dynasty and found at Tel-el-Amarna, on which the deceased, a Syrian mercenary, sits on a stool and drinks through a siphon, while his wife is seated in front of him (Fig. 3).[1]

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[1] Myres, *Handbook*, p. xxxi. S. Casson, *Ancient Cyprus*, pp. 69 ff., 135 ff.

[2] Nilsson, p. 378.

[3] *Ibid.*, *loc. cit.*

[4] Contenau, *Glyptique*, pp. 109 ff.

[5] Ward, *The Seal Cylinders of Western Asia*, 732.

[6] Contenau, *Glyptique*, fig. 193.

The importance of the appearance of the rite of drinking through a siphon on our amphora, which belongs to the beginning of the ninth century, is naturally great. It shows the cultural relations between Cyprus and Syria. These relations have a long tradition; ever since the neolithic or chalcolithic times such relations were apparent.[2] In the Early Bronze

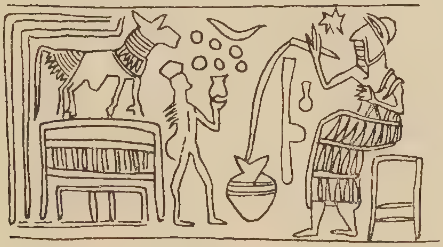

Fig. 2.—Syro-Hittite Cylinder Seal.
(After Contenau, *La Glyptique Syro-Hittite*, fig. 193.)

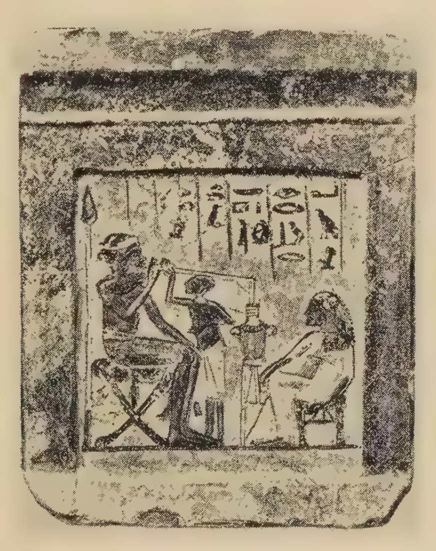

Fig. 3.—Funeral Stele of a Syrian Mercenary from Tell el Amarna.

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[1] Contenau, *Glyptique*, p. 111. See also W. Spiegelberg and A. Erman in *Zeitschrift für Ägyptische Sprache*, 34–36, 1896, 1898, pp. 126–129, pl. XVII, and *Journal of Egypt. Arch.* XII, 1926, pp. 22 ff. Xenophon (Anabasis IV, 5, 26) also speaks about this custom. Mr. Mallowan discovered at Chagar Bazar copper drinking tubes which contained reed siphons (*ILN*, March 1937, p. 518, Fig. 1).

[2] See 'Excavations at Erimi,' *RDAC*, 1936, I, p. 142.

Age they become more evident, while in the Middle and Late Bronze Ages they are very close.[1] The excavations at Ras-Shamra-Ugarit have confirmed the close commercial and cultural contacts between Cyprus and the Syrian Coast, and Dr. Schaeffer's demonstration [2] is most convincing. The beginning of the first millennium is marked by an interruption in the relations of these two countries,[3] but later in the eighth century these are again established. This was mostly due to the new impulse of Assyria and its expansion westwards. The fact that in the year 709 B.C. seven kings of Cyprus, which was then an important Power, came to do homage to Sargon II and that a record of this surrender was set up in Kition proves the new orientation.[4]

It is, however, important to remark that our amphora belongs to the beginning of the ninth century—*i.e.*, a period of rather rare relations with the East; on the other hand, the Syro-Hittite cylinders and other documents on which the rite of drinking through a reed or siphon appears date from the later part of the second millennium, a fact which shews a chronological distance between them and our amphora. This, however, need not weigh much in the attempt to connect the documents in these two countries, as it is quite possible that the custom was introduced into Cyprus in the late part of the second millennium—*i.e.*, in a period of closest interrelation—and hence remained in Cypriot tradition.

The scene of the enthroned deity or deified dead receiving offerings by processions of servants seems to be of Egyptian origin,[5] but it also appears on reliefs of the Hittite area and in Phoenicia, where we have a remarkable example: the Ahiram sarcophagus.[6] On one of the long sides of this important monument which dates from the thirteenth century B.C. appears the King, seated on a throne with winged sphinxes flanking the sides, a remarkable detail which connects the sarcophagus with our amphora, although here the sphinx is represented behind the throne. There is, however, a terracotta figure of an enthroned lady from Ayia Erini temple site which shews two sphinxes, one on either side of the throne (Plate 9*a*).[7] This statue not only shews an identical arrangement, as on the Ahiram sarcophagus, but also illustrates particularly well the enthroned lady on our amphora. The throne, the sphinx, the stool for the feet are common elements on all the three documents.

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[1] Gjerstad, *Studies*, pp. 303 ff.

[2] Schaeffer, pp. 91 ff. Also: 'Die Stellung Ras Shamra-Ugarits zur Kretischen und Mykenischen Kultur', in *Jahrbuch*, 1937, pp. 139 ff.

[3] Myres, *Handbook*, XXXIII.

[4] The great importance of Cyprus in trade with the Syrian coast received a recent confirmation through Sir R. Woolley's excavations near Antioch in 1926. The level 8 at Tal Sheikh Yusuf shows that Cyprus had a virtual monopoly of the trade. Levels 8 and 7 are attributed to the eighth and early seventh centuries. See *Antiquaries' Journal*, Vol. XVII, p. 9.

[5] Contenau, *Manuel*, II 1060.

[6] *Ibid.*, pp. 1056 ff.

[7] *SCE*, II, Pl. CCXXXIII, 1011. About the connections between animals of real or fantastic nature and thrones of deities, see Contenau, *Manuel*, II 1060, and *Civilisation Phénicienne*, p. 178.

A similar scene occurs on the Nimrud ivory pyxis,[1] which is dated to the ninth century B.C., and in the West on Dipylon vases [2] and on a silver bowl found at Olympia.[3] In Cyprus it occurs on the Ormidhia vase, which is now in the Metropolitan Museum of New York,[4] although this vase belongs to a much later period than the Hubbard amphora.

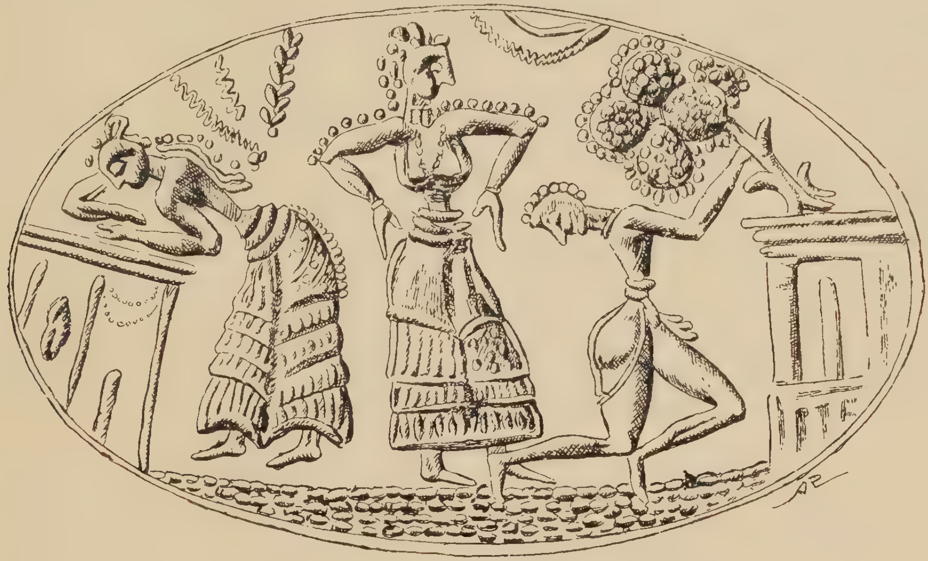

FIG. 4.—GOLD RING FROM MYCENAE.

We must, however, remark that the scene of the enthroned deity on our amphora includes only one servant or adorant, and not a whole procession, such as appears on the Ahiram sarcophagus, the Nimrud ivory pyxis, and the Dipylon vase mentioned above.

This shews closer similarity between this scene and the one represented on the Syro-Hittite cylinder above mentioned, on which only one servant or adorant appears. The same, however, occurs on the Olympia bowl, where the scene includes only the enthroned deity and the adorant.

Another element bring us to a different sphere of culture, and that is the dress of the woman who pours into the jar in front of the enthroned deity, as well as that of the dancing women. They wear a kind of skirt, which appears to be fastened round the waist with a thick girdle wound round many times.[1] This skirt recalls the ritual skins worn by the adorants on the Ayia Triada sarcophagus.[2] On the first side of the sarcophagus the persons who bring offerings to the occupant of the grave have nude busts and wear skins. The woman who pours liquid into the jar on the same side of the sarcophagus wears a similar skin over her dress. Similarly dressed is the woman consecrating objects on an altar on the second side of the sarcophagus. It is therefore not at all surprising to recognise on our amphora the same ritual skin, especially since the adorants have nude busts exactly like the adorants bringing gifts on the Ayia Triada sarcophagus.[3] This is furthermore corroborated by the cross-hatching decorating the skirt of the woman on the right of the lyre-player, by which possibly the hair of the skin is indicated. This suggestion will be strengthened if we recall that according to tradition [4] it was the custom to wear a sheep's skin while sacrificing to Aphrodite in Paphos. We might therefore have on the Hubbard amphora an early evidence shewing this tradition which derives from the Mycenaean world and was incorporated in Cypriot customs.[5]

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[1] Barnett, *Iraq*, II 2, Pl. XXVI, 1 and p. 189.
[2] *Athen. Mitt.*, 1893, p. 113, Fig. 10.
[3] Fürtwangler, *Olympia*, IV, Taf. LII.
[4] Perrot et Chipiez, III, Fig. 523.

The fact, however, that the skirts are filled with dull brown or purple colour may be an obvious objection to their identification with the ritual skins on the Ayia Triada sarcophagus and the skin worn at the sacrifices to Aphrodite at Paphos. But if (*a*) we recall that one of the skirts is filled with hatching, which may be interpreted with greater possibility as indicating the hair of a skin, and (*b*) the general lack of care in rendering the details, our interpretation may suffer less. But even if the skirts are not actually skins and are made of some other material, their resemblance in form to the ritual dress on the Ayia Triada sarcophagus or on other documents of the Mycenaean world holds good.

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[1] This may be compared to the girdle round the waists of the female figures on a gold ring from Mycenae. (Dussaud, fig. 300) (Fig. 4). One detail, however, is worth mentioning: I pointed out before that along the inside of the outline of the chest appears a band of dull purple colour which is extended to fill the hands. It is not at all impossible that the pot-painter meant to represent the tight-fitting jacket of the Minoan snake-goddess with large opening in front through which the breasts project. Minoan jacket and skirt are also worn by female figures represented on a fragmentary silver bowl from Cyprus: Myres, *Handbook*, p. 464, No. 4557.

[2] Dussaud, pp. 402 ff.

[3] The female figures on our amphora may also be compared to those on the gold ring from Mycenae (Evans, *Palace of Minos*, II, 341, fig. 194, e) who wear flounced skirts and have the bust nude.

[4] Chr. Bhirkenberg, *Le temple de Paphos*, pp. 23 ff.

[5] The Ahiram sarcophagus (Contenau, *Manuel*, p. 1058) bears an element which may be brought into connection here; on the narrow sides two groups of four women, two raising hands above their heads, and two touching their breasts. The bust is nude and the dress consists of a skirt tightened round the waist and above the ankles. M. Dussaud thinks that these women do not dance, but that they have put on the rough funeral dress, and that some cover their heads with ashes or tear their hair, while others beat their breasts in sign of grief. Similar women, but differently interpreted, appear on the Amathus sarcophagus (Perrot et Chipiez, III, Fig. 417). The procession of women therefore in the Ahiram sarcophagus is quite different. There the women do not dance, their dress is different and the style in general bears no great resemblance to the procession on the amphora.

The suggested similarity of the ritual dress is supported by other characteristics, and first I may mention the part played by women in the rite represented on the amphora. The same preponderant part is played by women on the Ayia Triada sarcophagus, where this is considered as a purely Minoan–Mycenaean element.[1] Moreover the bull's head appearing on the left of the figure pouring libation may be brought into comparison with the sacrificed bull appearing on the second side of the same sarcophagus. Although the bull's head on the amphora is stylised, it cannot be otherwise interpreted than as representing the sacrificed animal or the sacrifice. Detached heads of bulls or other animals occur on rings or seals of the Minoan–Mycenaean world, and are interpreted [2] as representing the sacrificed animals. That the liquid poured is the blood of the sacrificed animal seems highly probable, and agrees with the rite represented on the sarcophagus. On the second side of the latter, below the neck of the sacrificed bull, appears a vase in which the blood of the animal is collected. This vase is identical with those the contents of which are poured into the large crater on the first side of the sarcophagus. This is confirmed by the fact that the liquid poured is red and represents the blood of the bull collected in the vase on the second side.[3]

The alternative, however, that in the case of the Hubbard amphora the liquid poured is not blood but possibly wine (in which case we would be more in agreement with the custom related by Xenophon), is not to be rejected. We would then have on the one hand the bull-sacrifice and on the other the offering of wine.[4]

I may now deal with the dancing group appearing on the second zone. I have already described this group, which is composed of four women dressed in the same manner as the figure pouring libation on the first zone. In the middle appears the lyre-player. Poulsen [5] thinks that these dancing groups, which, besides occurring on objects originating in Asia, appear on a number of geometric vases found in Greece, are of oriental inspiration. Kunze,[6] on the contrary, considers them as being of Greek origin and as depicting Greek customs more appropriately. While describing the first zone on our amphora I pointed out some analogy with the rites and other details appearing on the Ayia Triada sarcophagus.

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[1] Dussaud, p. 410.
[2] Nilsson, pp. 197 ff.
[3] Dussaud, p. 406.
[4] About the part played by wine in Minoan–Mycenaean cults see Nilsson, *op. cit.*, p. 297
[5] Poulsen, p. 36.
[6] Kunze, pp. 212 ff.

Now, the rite performed by the five figures on the second zone has many analogies with that performed on the Ayia Triada sarcophagus, where we have the lyre accompanying the libation and the group of five women accompanied by a flute-player. It would therefore be reasonable to think that we have here a ritual dance the origin of which may be traced back to Mycenaean times, a fact which is not in disagreement with other elements of the rite.

Whatever may be the origin of the rite performed by the dancing group, it occurs both in the east and west. One of the most typical documents found in Asia is the Nimrud pyxis,[1] on which there is a procession of women advancing with music to worship an enthroned goddess. If we proceed westwards, we find this motif in Cyprus. Besides our amphora we have the Idalion patera.[2] There we have the enthroned deity, the group of dancing women holding hands, the musical accompaniment (lyre, flute, tambourine), the table standing in front of the enthroned deity, as well as the adorant bringing food, etc. This patera is considered by Von Bissing to be a product of local Cypriot art, whilst Poulsen,[3] judging from the dress of the dancing women, tends to give it an oriental origin. The close analogy between this patera and the Ormidhia vase,[4] which belongs to the period of strong oriental influences in Cyprus, justifies us in finding in the Idalion patera strong oriental influences as well. Here we must point out the striking differences between the scene represented on our amphora and those on the Idalion patera and the Ormidhia vase. We see that the libation and the bull-sacrifice do not occur at all in the two latter documents. On the other hand, the dancing group and the procession of offerings do appear, with the difference that the old dress, the skirt (or sheepskin) is abandoned, and instead long tunics are worn.

To the class of the Idalion patera and the Ormidhia amphora the Idalion amphora found by the Swedish Cyprus Expedition may be added, although it is later in time[5] (Plate 9*b*). There appears a group of eight female figures in relief dancing and holding hands.

Other documents include a cylinder seal from Cyprus which shows a group of dancing women holding hands.[6]

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[1] Barnett, *Iraq* II 2, Pl. XXVI.

[2] Perrot et Chipiez, III, Fig. 482. Here I may mention another fragmentary patera (Myres, *Handbook*, No. 4557) on which a royal feast is depicted: it includes flute, harp, and tambourine players and adorants bringing food-offerings. All the adorants are women, and are dressed in Minoan jacket and skirt.

[3] Poulsen, p. 34.

[4] Perrot et Chipiez, III, fig. 523.

[5] It is placed under white-painted V ware which flourished in the fifth century B.C. *SCE* II, Pl. CLXV 9.

[6] Ohnefalsch Richter, Pl. CXXVIII 6. Kunze, note 50, dates it from the sub-Mycenaean times.

On the Greek mainland this motive occurs frequently on pottery of the geometrical period, in Attica, Boeotia, Argos, and Sparta.[1] Among these is a fragmentary vase from the Amyklaion [2] (Fig. 5), on which appears a group of figures holding hands. Between two of these figures appears a lyre, whilst two others hold in their joined hands a branch in a similar way as on our amphora.

Dancing women holding hands also appear on fragmentary bronze bowls from the Idaean cave.[3] Incidentally on one of these fragments appears a woman [4] who holds an object from which hangs a fish. This affords a remarkable analogy with the painted figure holding a string of fishes in the Cypriot amphora in the Louvre,[5] which apparently comes from the same area as the Hubbard amphora (see below).

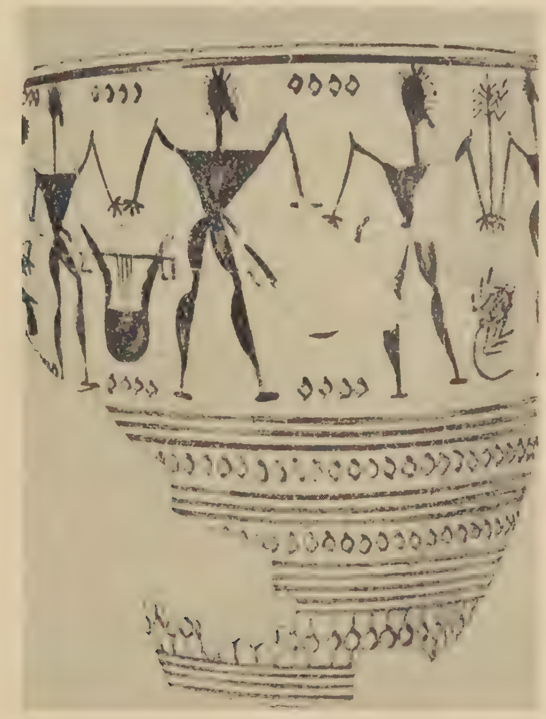

FIG. 5.—FRAGMENTARY VASE FROM THE AMYKLAION.

Further, the Olympia bronze bowl now in the National Museum at Athens should be mentioned. I have already had the opportunity to speak about this bowl in connection with the enthroned deity. Now it may be brought into connection with our amphora on the grounds of the group of the female figures, the first of which holds a lyre, the second a cymbal, and the third plays a double flute.

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[1] Kunze, pp. 212 ff.

[2] *Eph. Arch.*, 1892, Pl. 4.

[3] Kunze, Pl. 48.

[4] F. Halbherr, *Museo-Italiano*, Pl. IX.

[5] M. Rutten, *Deux vases Chypriotes du Musée du Louvre* (*Mélanges Syriens*), pp. 435 ff. Pl. I.

The above-mentioned documents, on which the group of dancing female figures accompanied by musicians appear, and which range from Assyria through the Phoenician areas and Cyprus to the Greek mainland, give an idea of the wide sphere in which the theme was favoured. A glance at all these documents will convince us that the group of dancing figures on our amphora in spite of the general resemblance in the motive, remains unique as far as the dress of the figures and the style are concerned. Even the objects found in Cyprus and bearing the same motive are far from being identical with the amphora scene. The reason for the latter is to be attributed to the early date of our amphora which, as said before, belongs to the beginning of the ninth century, *i.e.*, before the period of close relation between Cyprus and the Eastern world. But it is mainly to be attributed to historical reasons if of course the Mycenaean elements already pointed out are to be accepted. Cyprus after the invasion of the peoples of the sea, the destruction of the Mycenaean centres and the interruption in the relations with west and east, continued a quiet and undisturbed life which conserved a good deal of the Mycenaean traditions introduced in the 14th century B.C. and later. We would then have in the scenes appearing on our amphora a remarkable evidence of a rite which retains on the one hand Mycenaean traditions and on the other contains local and other elements which later are also favoured in the Orientalising art.

But the most important feature is the use of a drinking siphon by the enthroned deity. As pointed out before, this custom is typically Syrian and its introduction into Cyprus may date from the 14th century B.C. when close commercial and cultural relations existed with the Syrian coast. We find no record of it in Cyprus in the end of the second millennium but we notice it on our amphora which dates from a much later period.

Here we have one more proof of the conservatism of the Cypriots. But what is even more remarkable is the blending of the two cultures, Western and Eastern, the result of which is peculiar, and typically Cypriot. Similar phenomenon occurred in earlier times: thus the Mycenaean ivory gaming box from Enkomi, near Salamis, shows on the one hand typical Mycenaean influence illustrated by the hunting scene and the bulls and on the other (?) Hurrian influence evidenced by the huntsmen. Hurrian influence came of course from Syria, where the Hurrians played an important part.[1]

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[1] See R. D. Barnett, *Phoenician and Syrian Ivory Carving, in PEQ*, January 1939, p. 11, Pl. VI–VII; also R. Dussaud, *Les Découvertes de Ras Shamra (Ugarit) et l'ancien Testament*, pp. 21 ff.

Two more Iron Age amphorae from Cyprus may be here mentioned, as they offer comparison with the Hubbard amphora. The first was found by me in the cemetery of Kaloriziki [1] below Curium, and is an amphora, belonging to the Bichrome II ware, with stronger Mycenaean tradition in shape and roughly dated to the second part of the tenth century B.C. In panels on the neck appear on either side (*a*) a figure holding a small jug over a large amphora, the outline of which is decorated with short strokes, possibly indicating garlands adorning the vase (Fig. 6). The figure is evidently engaged in pouring libation into the large amphora. (*b*) On the opposite side appears another figure holding a lyre (Fig. 7).

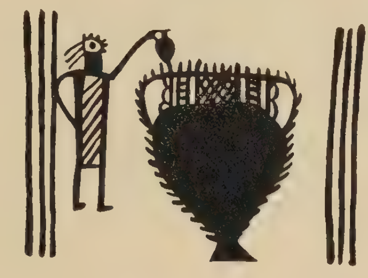

FIG. 6.—FIGURE POURING LIQUID INTO A LARGE AMPHORA.

(From the Kaloriziki vase.)

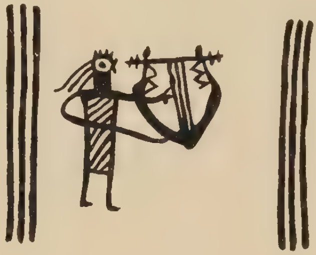

FIG. 7.—FIGURE PLAYING LYRE.

(From the Kaloriziki vase.)

Both figures have long hair and wear a kind of chiton decorated with oblique hatching.

We have here the essential elements of the two rites appearing on the Hubbard amphora: the libation intended for the dead and the lyre-player leading the dancing group.

Although the treatment of the figures is here much more primitive than in the Hubbard amphora, and the rites represented in their most schematic manner, the evidence is of great importance, as it shows a stage between the Mycenaean times and the period of the Hubbard amphora. The scenes on the Kaloriziki amphora do not permit us to make any conjectures as to the method through which the person for whom the libation is intended would be supposed to drink it. For this reason we are not able to say whether the custom of using a drinking-siphon belongs only to the eastern part of the island, and that the southern part, where the Kaloriziki amphora was found, ignored it. Other orientalising elements, however, occurring more frequently in the eastern parts of the island, such as the orientalising style on the Iron Age pottery previously mentioned, show that closer connections existed between the eastern part of the island and the Asiatic continent.[1]

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[1] *ILN*, 23 December, 1933, p. 1034, fig. 3.

The second vase is the Louvre amphora,[2] which I have already mentioned incidentally. This amphora, which is approximately of the same period as the Hubbard amphora, shews different motives which connect it with the Hubbard and Kaloriziki amphorae. We have firstly the instruments of the rite represented in the first of these two amphorae—*i.e.*, the vases of the libation and the lyre. Moreover, what have been interpreted as being the funeral bed and, underneath, the funeral cloth, appear to me to be simply (*a*) a kind of pyxis such as we find in the Iron Age and (*b*) a square tray similar to that illustrated in Myres' *Handbook* p. 70 No. 541. These objects therefore represent gifts offered to the dead. I mentioned before that the figure holding in the hand a string of fishes reminds us of a similar representation on one of the bronze bowls from the Idaean cave now in the Candia Museum. It is remarkable, however, that the figure holding the string of fishes on the Louvre amphora is dressed in the same kind of cloak as the figures on the Kaloriziki vase, with the difference that the first is decorated with cross hatching instead of the plain hatching.[3]

P. DIKAIOS.

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[1] Similarly the Late Bronze Age bichrome pottery known as that of Milia and proved to be of Asiatic inspiration (Schaeffer, pp. 49 ff., Heurtley, 'A Palestinian Vase-painter,' *QDAP*, VIII, 1–2, 21 ff.) occurs only in that site (*i.e.* Milia) and in other sites of the eastern regions of Cyprus.

[2] *Mélanges Syriens*, I, pp. 435 ff.

[3] My thanks are due to Mr. T. J. Dunbabin and *Mlle.* Simone Besques for helping me in my effort to obtain references to publications not in Cyprus.

ADDENDUM.

A white faience cylinder seal from Enkomi (*SCE*, I, p. 474, no. 67, pl. CL, 11) offers a parallel to the Hubbard Amphora: it shews a seated deity holding in his raised hand an object considered by the authors of *SCE* to be a staff, the end of which touches another object on a square base interpreted as a fetish or libation-jar; four adorants advance towards the deity, the first with lyre and (?) dancing, the others in long gowns, raising their hands. The 'staff' is in fact a drinking-siphon, one end touching the libation-jar (not fetish), the other apparently in the deity's mouth; and the whole represents a communion scene as on Syro-Hittite cylinders. This confirms my theory that the rite of siphon-drinking came to Cyprus from Syria in the Late Bronze Age, a time of close relationship between the two countries; for the seal is L.C. I–II. Further the adorants on the seal provide an antecedent from the Late Bronze Age for the procession on the Hubbard Amphora (Pl. 8*b*), and, since this was also a time of close Cypro-Mycenaean relationship (cf. *SCE*, I, p. 475, for Mycenaean vases found with the seal), the connection traced in this paper between the rite on the Hubbard amphora and that on the Ayia Triadha Sarcophagus is confirmed.

SUR LA DATE FINALE DE LA CIVILISATION ÉNÉOLITHIQUE DU TYPE GUMELNIŢA, DE ROUMANIE

Parmi les civilisations préhistoriques du sud-est de l'Europe, que les fouilles et les recherches effectuées depuis la guerre nous ont fait le mieux connaître, on peut ranger aussi la civilisation du type *Gumelniţa*. La station qui a donné son nom à cette civilisation a été identifiée dès 1921, et fouillée par nous-même en 1925;[1] c'est une des nombreuses stations de ce genre de la vallée inférieure du Danube roumain. A vrai dire, la civilisation identifiée dans ces stations était déjà connue auparavant, sous le nom de civilisation énéolithique des *tells* bulgares. Cependant, comme les fouilles méthodiques pratiquées en Roumanie ont démontré que ces *tells* comprennent des restes appartenant à deux et parfois même à plusieurs civilisations préhistoriques différentes, le besoin s'est fait sentir de donner à chacune des civilisations identifiées un nom différent. Aussi le nom de la station de Gumelniţa a-t-il servi pour désigner la civilisation à laquelle appartenaient toutes les stations similaires,[2] tandis que la civilisation plus ancienne, qu'on retrouve généralement au-dessous des premières couches du type Gumelniţa—mais qui n'avait pas été exactement située, au point de vue stratigraphique, dans les fouilles bulgares—a pris le nom de civilisation *Boian A*, d'après la station où elle a pu être relevée isolée, et bien définie comme telle.[3]

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[1] La station de Gumelniţa a été identifiée, en tant que site préhistorique, au cours d'un voyage d'études fait par notre regretté maître Vasile Pârvan qui—à côté du prof. J. Andrieşescu—peut être à juste titre considéré comme l'animateur de la préhistoire roumaine. La station de Gumelniţa était cependant connue depuis longtemps déjà, car les travaux agricoles avaient mis au jour de nombreux fragments céramiques, etc. Cependant, comme l'emplacement de la station de Gumelniţa—à peu près en face de Turtucaia (l'ancienne Transmarisca, de l'autre côté du Danube)—correspond à celui que devait avoir, d'après les données des anciens, la cité de Daphnae, fondée par Constantin le Grand, on a cru que les restes anciens de Gumelniţa pouvaient provenir des ruines de Daphnae. Les découvertes faites par un archéologue amateur de Olteniţa en 1923 et 1924 (cf. notre rapport, *Découvertes de Gumelniţa*, dans *Dacia*, I, 1924, pp. 325–342) et ensuite nos fouilles de 1925 (cf. Vladimir Dumitrescu, *Fouilles de Gumelniţa*, dans *Dacia*, II, 1925, pp. 29–103), ont prouvé qu'il n'y a à Gumelniţa que des restes préhistoriques, de sorte que la cité de Daphnae doit être cherchée ailleurs.

[2] C'est M. J. Nestor qui a donné à toute la civilisation le nom de *civilisation Gumelniţa* (cf. *Zur Chronologie der rum. Steinkupferzeit*, *Prähist. Zeitschrift*, XIX, 1929, pp. 110–143). Depuis, ce nom a été adopté par tous les archéologues.

[3] Découverte en 1923 par M. R. Vulpe et par l'auteur de cette étude, au cours des recherches faites pour la carte archéologique (cf. *Buletinul Comisiunii Monumentelor Istorice*, 1924, fasc. 40, p. 80 et suiv.). La station a été fouillée en 1925 par le regretté archéologue Vasile Christescu (cf. son étude: *Les stations préhistoriques du lac de Boian*, dans *Dacia*, II, pp. 249–303).

Une fois classée parmi les civilisations préhistoriques énéolithiques du sud-est de l'Europe, la civilisation Gumelnița a fait l'objet de nombreux articles et études, qu'il n'y a pas cependant lieu d'énumérer ici. Bon nombre de ces ouvrages portent sur le problème de la chronologie, l'un des plus importants qui se posent pour l'archéologie préhistorique. Et c'est justement l'un des aspects du problème de la chronologie que nous nous proposons d'examiner dans les pages qui suivent, après ces quelques explications préliminaires.

Sans doute, le *terminus ab quo* aussi bien que le *terminus ad quem* ont leur importance dans les discussions sur la chronologie d'une civilisation, de sorte que le problème pourrait être envisagé dans toute sa complexité. Nous nous proposons cependant d'examiner et d'essayer de déterminer le *terminus ad quem* de la civilisation énéolithique du type Gumelnița. Car, pour beaucoup des problèmes que posent les rapports de cette civilisation avec les autres civilisations préhistoriques du sud-est de l'Europe, ainsi que de l'Asie Antérieure, la solution dépend aussi du *terminus ad quem*.

La civilisation Gumelnița qui succède directement, dans le temps, à la civilisation Boian *A*—dont la fin est généralement placée aux environs de 2500–2400 av. J.-C.[1]—s'étend sur une période d'au moins 7–8 siècles. La conséquence naturelle de sa durée est qu'il y a dans l'évolution de cette civilisation plusieurs phases bien caractérisées, que l'on peut aisément étudier, tant au point de vue typologique qu'au point de vue stratigraphique. Sur ce dernier point, nos fouilles de Gumelnița ont démontré l'existence de deux couches de civilisation superposées, que nous avons désignées par les termes de Gumelnița *A* (la couche ancienne), et Gumelnița *B* (la plus récente, au-dessus de la première). Les observations de style et des types céramiques et autres aboutissent également à la même conclusion, à savoir que, à côté des traits caractéristiques et généraux qui donnent à cette civilisation un aspect très homogène, on y trouve néanmoins des différences qui nous autorisent, à ce point de vue aussi, d'y reconnaître deux phases bien distinctes.[2] Plus récemment, certains stations ayant livré au cours des fouilles plus de deux couches contenant les restes de cette même civilisation,[3] on a pu établir l'existence des phases *A*1 et *A*2, et même *B*1 et *B*2.[1] On a même cru pouvoir parler d'une phase Gumelnița *C*, et cela en se basant uniquement sur des données typologiques,[2] puisque au point de vue de la stratigraphie cette phase n'a pu être déterminée nulle part encore. D'une manière générale, nous estimons qu'on a accordé une importance exagérée aux différences typologiques de *A*1 et *A*2, et que, pour ce qui est de la phase *C*, celle-ci est insuffisamment prouvée, même au point de vue typologique. En effet, elle nous paraît plutôt une construction factice, formée avec des éléments détachés et groupés artificiellement, et qui nous semblent caractéristiques pour la phase Gumelnița *B*. Néanmoins, nous laisserons également de côté cette discussion, pour nous arrêter ici seulement sur le problème de la date finale de cette civilisation, c'est à dire la date de la fin de la phase *B*—selon nous, ou bien de la phase *C*, selon d'autres opinions.

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[1] Cf. notre article *Betrachtungen über die Steckdosen der rumänisch-bulgarischen Boian-A-Kultur*, dans la *Wiener Prähist. Zeitschr.*, XXIII, 1936, pp. 142–150, où sont reproduites toutes les opinions exprimées à ce sujet.

[2] Vladimir Dumitrescu, *Fouilles de Gumelnița*, *loc. cit.*

[3] Simultanément à Atmageaua Tătărască (cf. Vladimir Dumitrescu, *La stratigraphie des stations appartenant à la civilisation énéolithique balkano-danubienne, à la lumière des fouilles de Atmageaua-Tătărască*, dans *Istros*, I, 1, Bucarest 1934, pp. 37–43, et aussi notre article, *The painted decoration of the pottery from the eneolithic station near Atmageaua-Tătărască*, dans les *Annals of Archaeology and Anthropology*, XXIV, pp. 3–14, pl. I–V) et à Vidra (cf. D. V. Rosetti, *Săpăturile dela Vidra, raport preliminar*, dans *Publicațiile Muzeului Municipiului București*, nr. 1, 1934).

Il nous faut donc, avant d'aller plus loin, rappeler brièvement à quelle date se place, pour nous, la fin de la civilisation Gumelnița, et les éléments sur lesquels était basée cette datation. Nous examinerons ensuite toutes les objections qu'on a avancées contre la date que nous avons proposée, ainsi que les modifications apportées par les autres auteurs et par nous-même aux dates auxquelles nous avons cru d'abord pouvoir nous arrêter.

La première conclusion qui s'est imposée d'elle-même au cours de nos fouilles de Gumelnița et qu'on a pu vérifier ensuite, tant pendant les fouilles ultérieures que grâce à l'étude des matériaux déjà connus auparavant, c'est que la civilisation préhistorique du type Gumelnița ne peut en aucune façon être considérée comme une civilisation néolithique, mais qu'elle doit être rangée parmi les civilisations qui font la transition entre le néolithique et l'âge du bronze, et surtout qu'elle est plus rapprochée—comme date—de ce dernier que du premier.

Les éléments qui nous ont détérminé dès le début à placer Gumelnița dans la période finale de l'énéolithique et dans les premières périodes de l'âge du bronze, appartiennent tant au domaine de la céramique qu'à celui des métaux. En effet, dans la couche *B* de Gumelnița beaucoup de vases, ou de fragments de vases, indiquent clairement—par les analogies qu'ils présentent avec les objets de la civilisation de Lausitz—qu'on est là en plein âge du bronze. D'autres fragments céramiques qui proviennent sans doute de certains vases typiques pour l'âge du bronze, ainsi que l'abondance des cannelures profondes de toute sorte—verticales, obliques, horizontales—d'une grande précision de dessin, révèlent également la même influence de la technique des métaux, notamment celle du bronze.[3]

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[1] D. V. Rosetti, *loc. cit.*

[2] J. Nestor, *Der Stand der Vorgeschichtsforschung in Rumänien*, dans le 22. *Bericht der Römisch-Germanischen Kommission*, 1932, p. 11.

[3] Cf. notre étude *Fouilles de Gumelnița*, *loc. cit.*, pour tous les éléments qui, surtout dans l'étude de la céramique, nous obligèrent à placer la phase Gumelnița *B* à l'âge du bronze.

A côté de ces éléments fournis par la céramique, la présence d'un objet de parure taillé dans une feuille d'or nous a semblé apporter, dès le début, la confirmation de ces faits.[1] Il s'agit d'un pendentif—rappelant de près la forme des " cornes de consécration "—pourvu de deux petits trous pour la suspension et orné d'une série de points en relief, travaillés au repoussé.[2]

Au point de vue de la forme, ce pendentif doit être rangé sans conteste à côté de nombreux objets en bronze, de l'âge du bronze hongrois-transylvain.[3] Il nous semble cependant que la forme même de cet objet d'ornement trouvé à Gumelnița est très évoluée, de sorte qu'il doit être même à ce point de vue postérieur aux objets cités. Pour ce qui est de la technique du décor et de l'ornement même, ils nous ont paru dès le début tout à fait semblables à ceux qu'on a relevés sur une boucle d'oreille en or, découverte dans le nord-ouest de la Transylvanie, et qui appartient certainement à la II^e^ période de l'âge du bronze.[4]

Voilà donc, en lignes générales (auxquelles nous nous arrêtons, les détails pouvant être facilement trouvés dans les études que nous citons dans les notes ci-dessous) les éléments qui nous ont fait conclure que la phase Gumelnița *B*, à laquelle ils appartiennent sûrement, s'est prolongée jusqu'en plein âge du bronze, c'est à dire jusqu'à la II^e^ période.[5] C'est ce qui nous a déterminé à nous arrêter à la date de 1500–1400 av. J.-C., quand il nous a fallu exprimer en chiffres le *terminus ad quem* de cette phase et implicitement la date finale de la civilisation Gumelnița.[6]

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[1] Il faut d'ailleurs rappeler que les objets en métal, bien qu'en petite quantité, ont été trouvés dans presque toutes les stations du type Gumelnița, et même dans la phase la plus ancienne, *A*, phénomène constaté à Gumelnița même. Parmi les objets en cuivre de Gumelnița, on a trouvé aussi une *alène à tatouer*, fixée dans un os de volaille, et pareille à l'alène trouvée en Bohême, que Déchelette date à juste titre de la I^ère^ période de l'âge du bronze (cf. J. Déchelette, *Manuel*, II, 1, pl. I, no. 16). Aussi, meme si l'alène de Gumelnița est en cuivre, et non en bronze, il n'est pas douteux qu'elle est également un indice qu'il s'agit de la première période du bronze.

[2] Vladimir Dumitrescu, *Fouilles de Gumelnița*, pp. 99–100.

[3] *Arch. Ertesitö*, XIX, p. 235, nos. 10 et 11; Wosinsky, *Das prähist. Schanzwerk von Lengyel.*

[4] *Arch. Ertesitö*, XXXVI, p. 206.

[5] Vladimir Dumitrescu, *Fouilles de Gumelnița*, pp. 100–103.

[6] Vladimir Dumitrescu, *La cronologia della ceramica dipinta dell'Europa orientale*, dans *Ephemeris dacoromana*, IV, p. 257–308. Par la suite, en partant d'une série de vases caractéristiques pour la fin de l'âge du bronze, et découverts dans la station *B* de Boian (cf. V. Christescu, *op. cit.*, p. 286, pl. XXVII), station qui appartient également à la civilisation Gumelnița, nous avons émis aussi l'hypothèse que la civilisation Gumelnița avait pu durer en certains endroits même jusqu'à la fin de l'âge du bronze (cf. Vladimir Dumitrescu, *La plastique anthropomorphe en argile de la civilisation Gumelnița*, dans IPEK, VIII, 1932/33, pp. 49–72; cf. p. 51; et *La chronologie de la civilisation du type Gumelnița*, communication faite au Congrès International des sciences historiques de Varsovie, 1933). Cependant, vu les objections qu'on nous a faites, et surtout le fait que le professeur Christescu, qui avait découvert ces vases, nous a communiqué ensuite qu'ils avaient été trouvés dans une fosse postérieure, nous sommes revenus à notre première datation (cf. *Betrachtungen*, etc., *loc. cit.*, note 22).

Cette date si avancée pour la date finale de Gumelniţa a soulevé dès le début des objections ; aussi le but de ces notes-ci est justement d'examiner si à la suite de ces objections notre datation peut être maintenue ou doit être modifiée.

Dans son essai de synthèse sur les recherches archéologiques en Roumanie, M. J. Nestor[1] enlève toute une série d'éléments de la phase Gumelniţa *B* pour les attribuer à une phase *C*, qu'il est le premier à postuler. Ces éléments seraient, selon lui, les suivants; Les vases à cannelures et les vases côtelés, les vases à deux anses surélevées de Căscioarele,[2] le pendentif en or de Gumelniţa, etc. Tous ces objets dateraient de la phase finale de la civilisation Gumelniţa et permettraient de conclure que cette civilisation disparaît vers 1800. Cette date s'imposerait, selon M. Nestor, pour deux raisons. Premièrement, les analogies qu'il indique entre le bijou en or de Gumelniţa et d'autres objets, à savoir: l'identité de la forme de ce pendentif et des motifs ornementaux qui courent le long de la lame d'une des épées finement décorées de Mycènes,[3] et l'analogie entre le décor de ce même pendentif de Gumelniţa et celui d'un objet découvert à Batta, en Hongrie[4]—ce dernier devant être placé au début de la phase *B* de la chronologie Reinecke (soit au début de la V^e^ période de Gordon-Childe). En second lieu, par le fait que dans la station de Glina, au-dessus de la couche no. II, du type Gumelniţa *A*, il y a la couche no. III, dans laquelle on a découvert des restes appartenant à la civilisation du type Schneckenberg, qui a une place bien déterminée au point de vue chronologique, au début de l'âge du bronze[5]; aussi la civilisation Gumelniţa devrait-elle être considérée comme antérieure à cette date.

Cependant, ces objections—indépendamment du fait que les objets sur lesquels M. Nestor basait sa démonstration appartiennent à la phase *B*, selon nous, ou à la phase *C*, selon l'opinion de M. Nestor—ne peuvent nous éloigner très sensiblement de la date finale proposée par nous.

En effet, même si on admettait sans réserves les rapprochements faits par M. Nestor, pour le bijou en or de Gumelniţa, en négligeant ceux que nous avons signalés au début, il reste à préciser ce qui suit:

L'objet découvert à Batta devant être placé au début de la période *B* de Reinecke, la date qu'il nous fournit est *postérieure* à l'an 1600 av. J.-C., c'est à dire au moins le commencement du XVI^e^ siècle. D'autre part, pour tenir compte également des vases de Căscioarele rappelés par M. Nestor, nous ferons remarquer que, s'il est vrai que les vases à deux anses surélevées de Căscioarele sont étrangers, comme forme, aux produits de la céramique de la civilisation Gumelniţa, il n'est pas moins vrai qu'ils sont arrivés à Căscioarele au cours de la phase II de Căscioarele (respectivement

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[1] *Op. cit.*

[2] G. Ştefan, *Les fouilles de Căscioarele,* dans *Dacia,* II, pp. 138–197; cf. p. 159, fig. 18 nos. 2–3.

[3] G. Karo, *Schachtgräber von Mykenai,* pl. XCI, XCII.

[4] J. Nestor, *op. cit.*, p. 60.

[5] *Ibidem.*

Gumelnița *B*). Or, ces vases ne peuvent dater que de la IIe période de l'âge du bronze, pour le moins, et pas même du début de cette période. La présence de ces vases à Căscioarele II, dans un milieu du type Gumelnița, où ils n'ont pas été introduits ultérieurement, prouve que, alors qu'on les avait importés là, ou qu'ils y étaient fabriqués sur place par des potiers qui connaissaient cette forme, la phase correspondante de la civilisation Gumelnița durait encore. Mais alors, quelle est la signification de ce fait, sinon qu'il s'agit d'une date entre 1600–1500 av. J.-C., selon les dates proposées par la plupart de ceux qui ont étudié la chronologie de l'âge du bronze?

Avant de prendre en considération les opinions des autres auteurs qui—après M. Nestor—ont soulevé des objections contre notre datation, nous croyons devoir ajouter qu'il y a encore beaucoup d'autres éléments fournis par la même phase *B* de Gumelnița et par la IIe couche de Cascioarele, qui exigent la même datation. Nous ne pouvons évidemment les énumérer tous ici; nous nous bornerons à en examiner quelques-uns.

Parmi les boutons d'or découverts dans la tombe no. IV de Mycènes, il y en a qui sont ornés d'une sorte de *tetraskelion*,[1] ressemblant de près, par la conception du decor, à l'ornement de certains couvercles bombés de la phase Gumelnița *B*,[2] et même de la phase *A*. Il s'agit de ces bourrelets alvéolaires qui, toujours au nombre de quatre, partent du centre (juste à la base de l'anse) vers les bords du couvercle, comme autant de rayons incurvés. On dirait que soit les uns soit les autres de ces ornements sont sûrement dérivés ou inspirés des autres, ou du moins qu'ils copient tous des modèles similaires. Du reste, le même décor se rencontre plus tard aussi, sur des disques métalliques de la fin de l'âge du bronze.[3] Mais, pour en revenir à la date des boutons d'or de Mycènes, il est certain que ceux-ci sont postérieurs à l'an 1600, pouvant être placés, selon M. G. Karo,[4] aux environs de 1500 av. J.-C.

D'ailleurs, puisqu'il s'agit des analogies entre Gumelnița et Mycènes, il n'est peut-être pas sans intérêt de rappeler que l'objet en os, découvert à Gumelnița et qu'on estime être un brassard pour archer,[5] est absolument identique (matière, forme et technique) à toute une série d'objets similaires qui recouvrent et ornent la calotte d'un casque de Mycènes,[6] appartenant à la même époque, antérieure de peu à l'an 1500, que les objets mentionnés plus haut.

Un autre objet qui nous semble concluant, au point de vue de la chronologie, pour la phase finale de la civilisation Gumelniţa, c'est le couteau en cuivre découvert dans la couche II de Căscioarele ;[1] par sa forme celui-ci se situe plutôt dans la II^e^ période de l'âge du bronze, que dans la première.

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[1] G. Karo, *op. cit.*, pl. LX, no. 336; pl. LXII, nos. 676, 678, etc.

[2] Vladimir Dumitrescu, *Fouilles de Gumelnița*, p. 61, fig. 29, no. 2, etc.

[3] Cf. Vasile Pârvan, *Getica*, p. 329 et suiv.; pl. XIII, no. 1.

[4] *Op. cit.*

[5] Vladimir Dumitrescu, *Fouilles de Gumelnița*, p. 88, fig. 66, no. 7.

[6] Dans la tombe no. 4 de Mycènes: Musée National d'Athènes, nos. 523 et 526, vitrine 39. D'autres objets recourbés, du même genre, ornent un casque (tombe no. 518).

Après M. Nestor, deux autres auteurs roumains, MM. D. V. Rosetti et D. Berciu, ont présenté des objections au sujet de la date finale assignée par nous à la civilisation Gumelniţa.

M. Rosetti, en se basant sur les résultats des fouilles entreprises par lui-même à Vidra,[2] croit lui-aussi que la civilisation Gumelniţa (phase *B*) s'éteint à l'apparition de la civilisation du type Glina III–Schneckenberg ;[3] cette dernière étant caractéristique pour le commencement de l'âge du bronze, la civilisation Gumelniţa disparaîtrait donc alors que commence l'âge du bronze.[4] Dans le tableau chronologique dressé par M. Rosetti,[5] la fin de la civilisation de Gumelniţa est contemporaine du début de la civilisation de Glina III. Parmi les éléments propres aux fouilles de Vidra, et sur lesquels M. Rosetti s'est basé pour établir le *terminus ad quem* de la civilisation Gumelniţa dans cette station (couche Vidra IIc), il faut mentionner une hache de combat en cuivre, pourvue d'un trou ovale pour le manche, et coulé *à cire perdue*.[6]

Cependant, à notre sens, cet objet ne peut pas constituer un élément décisif pour la date finale de la civilisation Gumelniţa, vu qu'il a été découvert *avant* les fouilles de M. Rosetti,[7] et qu'au point de vue de la stratigraphie, sa position n'a pas pu être bien précisée.

Quant à M. Berciu, il formule une série de conclusions au sujet des civilisations énéolithique de la vallée inférieure du Danube, d'après les résultats des fouilles qu'il a entreprises dans deux stations du département de Vlaşca (sud de la Valachie), et, en partie, d'après les fouilles faites dans une station du département de Dâmboviţa (centre de la Valachie).[8] Nous retiendrons seulement ses conclusions sur la chronologie, les seules qui nous intéressent ici. M. Berciu divise toute la civilisation de Gumelniţa en trois périodes principales—I, II et III. La première comprend la phase Gumelniţa *A*1, la seconde, la phase Gumelniţa *A*2 ; la troisième comprendrait les phases Gumelniţa *B* et *C*.[9] Nous ne pouvons discuter ici le problème de la date du commencement de la civilisation du type Gumelniţa,[10] et il va de soi que nous ne nous arrêterons cette fois non plus sur la question de l'existence d'une phase *C*.

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[1] G. Ştefan, *loc. cit.*, p. 196, fig. 49, no. 13.

[2] D. V. Rosetti, *op. cit.*

[3] *Ibidem*, p. 29 et suiv. ; p. 57 et suiv.

[4] *Ibidem*.

[5] *Ibidem*, p. 60.

[6] *Ibidem*, pp. 29–30.

[7] *Ibidem*, p. 29.

[8] Cf. *Buletinul Muzeului jud. Vlaşca 'Th. Antonescu'*, publié par les soins de M. D. Berciu, fasc. I (1935) et fasc. II (1937), avec ses études sur les fouilles du département de Vlaşca.

[9] D. Berciu, *Săpăturile dela Petru-Rareş, loc. cit.*, vol. II, p. 1 et suiv., et aussi *Prime consideraţiuni asupra neoliticului din valea Dunării inferioare*, etc., *ibid.*, p. 31 et suiv.

[10] D. Berciu, *loc. cit.*, p. 89, donne la même date, pour les débuts de la civilisation de

Notons seulement que, en se basant sur les analogies avec le sud—qui sont pour M. Berciu les suivantes: Gumelnița *A* (*A*1 et *A*2, soit I et II), contemporaine de la période Dimini (thessalien II) et de Orchomenos II; Gumelnița *B* (respectivement *B* et *C*, soit III), contemporaine de la troisième période de Thessalie (Rachmani)—et sur d'autres éléments que nous ne citerons pas, pour abréger, M. Berciu conclut que, en lignes générales, la civilisation Gumelnița finit vers l'an 1700 av. J.-C.,[1] date qui correspond en même temps à de grands changements dans tout le centre et le sud-est de l'Europe, ainsi que dans le sud égéen.[2]

M. Berciu admet cependant que la dernière période de la civilisation Gumelnița présente réellement des analogies avec les premières périodes de l'âge du bronze dans l'Europe centrale; mais, selon lui, ces analogies se rapporteraient uniquement à la Ière et à la IIe période de l'âge du bronze de l'Europe centrale.[3] Néanmoins, plus loin il écrit: " Nous sommes enclin donc à prolonger en certains endroits l'existence de la civilisation Gumelnița jusque vers 1650 av. J.-C., tandis qu'on pourrait, en forçant un peu les faits à cause des données qui nous manquent encore, considérer la date de 1600 av. J.-C. comme *terminus ad quem* de la fin *partielle* de la civilisation Gumelnița." [4]

Il résulte des passages cités que M. Berciu, bien qu'il ne partage pas notre première opinion que la civilisation Gumelnița peut dépasser 1500 et descendre jusque vers 1400 av. J.-C., est celui qui se rapproche le plus de la date que nous avons proposée.[5]

Après l'exposé des dates auxquelles se sont arrêtés les auteurs qui ont étudié l'énéolithique roumain de la vallée inférieure du Danube, il reste à voir quelle est, parmi celles-ci, la date qu'on peut considérer comme la plus certaine.

En tenant compte aussi bien de ses relations indéniables avec le sud (Mycènes, etc.), que de ceux avec le centre de l'Europe, un fait paraît établi d'une manière incontestable: c'est que la phase finale de la civilisa-

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Gumelnița. Notons, en passant, que nous n'avons jamais contesté *l'existence de la couche A*1 *de Vidra* (que nous avions déjà rencontrée à Atmageaua-Tătărască), comme l'affirme M. Berciu (*loc. cit.*, p. 89, note 419); nous avons seulement fait des réserves sur les différences de style entre les produits céramiques des deux couches de la civilisation Gumelnița *A*, ce qui n'est pas du tout la même chose.

[1] *Ibidem*, *passim*, et le tableau chronologique, p. 85.

[2] *Ibidem*, p. 84 et suiv.

[3] *Ibidem*, p. 81.

[4] *Ibidem*, p. 82.

[5] Ainsi que nous l'avons déjà fait remarquer (p. 76, n. 6), la date finale de l'âge du bronze, que nous avons cru à un moment donné pouvoir retenir, a été abandonnée par nous peu après, de sorte qu'il est inutile d'examiner ici les objections que M. Berciu a formulées quand nous y avions déjà renoncé. Nous rappelons ici, du reste, que M. G. Ştefan (*op. cit.*, pp. 196—197) a affirmé dès le début que la couche II de Căscioarele dure jusqu'au commencement de la IVe période de l'âge du bronze.

tion Gumelniţa comporte des éléments qui descendent en deçà de l'an 1600 av. J.-C. En effet, tant les analogies avec l'Europe centrale, établies par nous, que celles qu'a rélevées M. Nestor pour l'objet en or découvert à Gumelniţa, nous ramènent au commencement de la phase *B* de Reinecke (soit la période V de Gordon-Childe), par conséquent après 1600 av. J.-C. Les analogies des vases à deux anses et le couteau en cuivre de Căscioarele II nous ramènent également à la IIe période de l'âge du bronze, donc là aussi après 1600. Quant aux relations avec le sud, tant les analogies qu'à signalées M. Nestor pour le pendentif en or, que celles qur nous avons relevées pour les couvercles ornés du tetraskelion, font penser au XVIe siècle, donc de nouveau après 1600 av. J.-C.

Quelle est donc la conclusion qui s'impose d'une manière évidente, sinon que la civilisation Gumelniţa durait encore même après 1600 av. J.-C.? Combien exactement son existence s'est-elle prolongée, nous ne saurions le préciser encore. Mais cette datation, contrairement à ce qu'on en a pu dire, n'a rien de forcé. Du reste la datation à laquelle nous nous arrêtons ici ne diffère pas tellement de celle que nous avions proposée en premier lieu. En effet, si dans nos premières considérations sur la chronologie nous avons proposé, pour la fin de la civilisation de Gumelniţa, une date à l'intérieur du XVe siècle, entre 1500 et 1400 av. J.-C., c'était pour couvrir aussi en entier la IIe période de l'âge du bronze. Cependant, puisque les éléments tout à fait concluants pour toute la IIe période, et surtout pour la fin de cette période font défaut, il nous semble maintenant préférable de nous arrêter au premier siècle de l'évolution de la IIe période de l'âge du bronze, soit au XVIe siècle. Toutefois, comme nous venons de le dire, il est impossible de proposer une date plus précise.

Evidemment, on ne saurait affirmer que la civilisation Gumelniţa a pu avoir la même durée sur toute l'aire où elle s'est développée et dans toutes ses stations. Ainsi que nous l'avons déjà dit, le fait que, dans certaines stations du type Gumelniţa, on rencontre au-dessus des couches Gumelniţa une couche du type Schneckenberg, ne veut pas dire que cette nouvelle civilisation avait occupé toute l'aire de diffusion de la civilisation Gumelniţa, ou qu'à son apparition cette dernière avait partout cessé d'exister. D'autre part cependant, l'absence de la couche caractéristique du type Schneckenberg, dans beaucoup de stations, ne permet pas de conclure que cette civilisation n'a pénétré dans la région danubienne qu'après la disparition complète de la civilisation Gumelniţa.

Bien au contraire, il a dû certainement y avoir là une interpénétration de civilisations sur un même territoire, l'ancienne civilisation énéolithique ayant continué d'exister pendant tous ces temps du commencement de l'âge du bronze, parallèlement aux nouvelles civilisations caractéristiques pour l'âge du bronze. L'influence réciproque n'a pu manquer d'avoir lieu, comme le prouvent, entre autres choses, les vases du dép. de Dâmboviţa, dont la forme est nettement caractéristique pour la civilisation Gumelnița, tandis que les ornements appartiennent à la céramique cordée.[1]

La résistance et la persistance de cette vieille civilisation, présentant des caractères propres tellement différents de ceux des nouveaux courrants, à une époque où de nouvelles vagues de populations apportaient du Nord et du Nord-Ouest d'autres civilisations, peuvent s'expliquer non seulement par les différences ethniques, mais aussi par la densité assez grande de la population énéolithique de la vallée inférieure du Danube, ce qui permettait aussi une résistance materielle, à côté de la résistance d'ordre spirituel. Car, s'il est permis de tirer des éléments dont nous disposons jusqu'à présent, des conclusions de cet ordre, il nous semble hors de doute qu'à l'époque énéolithique la population ait été particulièrement dense dans ces régions du bas Danube, et probablement plus nombreuse qu'à l'époque du bronze.

Les nouveaux venus n'ont pas pu pénétrer partout, dès le début; ils ont dû le faire petit à petit, au fur et à mesure que fléchissait la résistance des indigènes, et à mesure que les armes de bronze devenaient plus nombreuses, de manière à assurer une supériorité décisive sur les vieilles armes en silex et en pierre polie, et sur les rares armes en cuivre. Nous pensons d'autre part que la rareté même des trouvailles appartenant aux premières périodes de l'âge du bronze, dans cette région d'intense diffusion de la civilisation énéolithique du type Gumelnița, à l'est de l'Olt, dans la plaine du Danube, est une preuve de plus de la durée prolongée et dans des formes de vie traditionnelles, pas trop influencées par les nouveaux temps des métaux, de la civilisation du type Gumelnița.

Mais, ainsi que nous l'avons déjà précisé ailleurs, le fait que la civilisation du type Gumelnița persiste encore au moins pendant deux siècles après le début de l'âge du bronze dans l'Europe centrale, ne saurait en aucune façon nous faire conclure qu'il s'agit d'une civilisation du bronze. Au contraire, il s'agit sans cesse d'une civilisation énéolithique par excellence, dont beaucoup d'éléments traditionnels et essentiels se conservent jusqu'à l'extrême fin de cette civilisation. Et, de même qu'elle n'est jamais devenue une civilisation du bronze, même quand elle était contemporaine des civilisations du commencement de l'âge du bronze, à ses débuts non plus la civilisation Gumelnița n'a été une civilisation néolithique, comme on l'a souvent affirmé, mais exclusivement énéolithique. Telle quelle, elle constitue un phénomène de longévité, caractéristique d'ailleurs aussi pour l'autre civilisation énéolithique si importante de la Roumanie et du sud-est de l'Europe, la civilisation à céramique peinte du type Cucuteni.

VLADIMIR DUMITRESCU.

Bucarest, juin 1939.

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[1] D. Berciu, *loc. cit.*

Ἔχθρη παλαίη.

The passage in Herodotos which above all others is written as if to provide a test on their own ground of the historical application of archaeological discoveries is v, 88, 2: 'Αττικὸν δὲ μήτε τι ἄλλο προσφέρειν πρὸς το ἱρὸν μήτε κέραμον, ἀλλ' ἐκ χυτρίδων ἐπιχωριέων νόμον τὸ λοιπὸν αὔτόθι εἶναι πίνειν. The archaeological results of the victory of Argives and Aiginetans over Athenians are given thus:—

(1) The change of dress in Athens from Doric to Ionic.

(2) the νόμος made by the Argives and Aiginetans, that their pins should be increased to half as large again;

(3) that these pins should be dedicated in the sanctuary of Damia and Auxesia;

(4) that no Attic pot should be brought into the sanctuary.

Herodotos adds the corroborative detail that the pins worn by Argive and Aiginetan women are now larger than they used to be.

Most attention has been given to the question of the pots; many scholars have supposed that the prohibition of Attic import was general in Aigina and the Argolid, and have tried to date it, and hence the war.[1] In particular it has been invoked to account for the extremely small quantity of Attic pottery found at the Argive Heraion.[2] The Attic imports to the Heraion are worth re-examining; the earliest is *AH* ii pl. 67, recognised as Protoattic by Payne [3] and J. M. Cook [4] independently; and the other Protoattic sherds *id.* pl. 62, 1–2 and p. 173, and *BSA* xxxv, 204. This is all to be dated in the second quarter of the seventh century. The oldest sixth-century piece is pl. 61, 22, of the Polos group (see *NC* 190 no. 22); pl. 62, 12 is from a Siana cup; the others illustrated on pl. 62 are all of the second half of the century. Other sixth-century imports are almost as scanty as Attic. There is a little Laconian of poor quality (pl. 62, 3–6, p. 173; p. 155, fig. 92); no East Greek [5] or Cycladic, though the Argolid lies patently open to Eastern contacts. There is much less Corinthian than Protocorinthian, less Middle and Late, apparently, than Early Corinthian; the various forms of Late Corinthian II are poorly represented (cf. p. 131, fig. 60; 101, fig. 41; some of the kotylai discussed on p. 176, fig. 98, are probably of the second half of the sixth century; cf. *NC* 324).[1] The sixth-century Attic pottery is at least not less than the Corinthian. One needs therefore to explain not why there is so little Attic, but why there is so little sixth-century pottery of any kind. The reason should be that the pottery was regularly cleared out of the temple and dumped [2] (Hoppin says ' certain classes were more common in certain spots than in others,' p. 61), and the sixth-century dumps have not been found. There are quantities of good sixth-century bronzes and terracottas, so the cult did not decline in importance after the seventh century.

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[1] For previous discussion see P. N. Ure, *Origin of Tyranny* pp. 164 ff., 314 ff. My historical conclusions, it will be seen, are similar to his, though I differ from his interpretation of archaeological results (the body of evidence has been considerably increased since he wrote). My obligation to A. A. Blakeway's views, shortly to be published, is great.

[2] J. C. Hoppin, in *Argive Heraeum* ii 174 ff.; *Classical Review* 1898, 86–7.

[3] *Perachora* i 145.

[4] *BSA* xxxv, 191; new photographs, pl. 52.

[5] Seventh century import; p. 135 fig. 66. See also *Asine* p. 321 fig. 219, 4 (Rhodian Geometric).

Hoppin's theory of a break in the middle of the sixth century must be abandoned. Ure suggests instead the early seventh century.[3] There is no Attic Geometric from the Heraion, that I know of; it would be an odd effect of the embargo if imports from Attic rose from nil to even the small figure represented by the Protoattic sherds. There is no Attic pottery dating from the second half of the seventh century. So it would be possible to date the embargo to this period, considering the Argive Heraion alone.

But at Aigina there is no break in the series of Attic imports from the Geometric period onwards. In the Aphaia deposits Thiersch found Attic Geometric, and black-figure, in abundance,[4] but not Protoattic. But in the unpublished finds from the Aphrodite temple Attic is in all periods from the late eighth century onwards only slightly less abundant than Corinthian, and all classes are well represented. There is no loophole for an embargo of even comparatively short duration. The first half of the century is completely covered by the vases now in Berlin;[5] the middle, with the Ram Jug and other pieces from the same workshop, is well represented;[6] published pieces of the rest of the century are limited to the sherd *BSA* xxxv pl. 54 *f* (= Benndorf, *Griechische und Sizilische Vasenbilder* pl. 54, 1), the bowl by the Nessos painter *CVA Berlin* i, pl. 46–7, and the sherd *id.* pl. 48, 1, but there is no lack of unpublished pieces. It is evident that there can at no time have been an effective embargo applying to the whole of Aigina.

Herodotos' words can therefore apply only to the sanctuary of Damia and Auxesia. This is what he says; the subject of προσφέρειν is γυναῖκας at the end of the preceding clause, not the Argives and Aiginetans;[1] all the points, except the size of the pins, apply to one sanctuary, as is made clear by the repetition of τὸ ἱρὸν in two successive clauses, taken up again by αὐτόθι. There is no reason why Argives should dedicate anything in this sanctuary. The sense is slightly obscured by the naming of Argives and Aiginetans together again in the next clause, in which Herodotos goes back to his first and general point, the size of the pins, by way of rounding off the discussion; so it may be as well to give a bald translation: ‘ The Argives and Aiginetans also made this a custom thereafter, to make the pins of both half as large again as the established measure, and for the women to dedicate pins especially in the sanctuary of the goddesses, and to bring nothing Attic into the sanctuary, least of all pottery, but the custom to be for the future to drink there from local pots. Now the Argive and Aiginetan women still in my time, after so long, wear pins bigger than before.’

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[1] Most of these will surely be Corinthian, though some might be of Attic or Argive manufacture; only an examination of the clay of all of them could determine the point.

[2] For this practice cf. *MA* xxxii, 122 ff.

[3] *op. cit.* pp. 314 ff.

[4] *Aegina* pp. 436, 458.

[5] *CVA Berlin* i.

[6] Cook, *BSA* xxxv, 193–4; K. Gebauer *CVA Berlin* i, 7.

Herodotos’ words apply only to the sanctuary of Damia and Auxesia, and there is no justification for supposing that the state of affairs he describes represents a general embargo or ‘ primitive measure of protection.’[2] On the contrary, there was never such a general embargo in Aigina. The sanctuary of Mnia and Auzesia, as the Aiginetans called them, has not yet been found and dug, though Herodotos gives its location, in the middle of the island in a place called Oia, about twenty stades from the polis; as the temple inventory[3] was found east of the city, it was presumably in that direction.[4] Were it to be dug, one would expect to find quantities of the unpainted hand-made pottery such as was used not only at the Aphaia temple (*Aegina*, pp. 441 ff.) but also at Tiryns, where little other pottery was found, at the Argive Heraion, Corinth and Perachora: especially drinking-vessels, as Herodotos expressly says πίνειν. Drinking-vessels are in many sanctuaries the most frequent offerings, as at Perachora, the Delian Heraion, and most markedly, Lokroi Epizephyrioi, where thousands of little kotylai were found.[5] But in this Argive-Corinthian monochrome ware they are comparatively rare.[6]

The archaeological evidence has so far offered no date for the war. The dress and pins are hardly more helpful. The change in women’s dress in Athens took place in the middle of the sixth century.[7] It was a gradual process, like other changes in fashion. It will hardly have been imposed on Athenian women for a single misuse of their dress-pins, and it is unlikely that it is rightly associated with this defeat. One might suspect this from reading Herodotos, for the motive he gives for the change is improbable, though not ludicrous or insufficient. So the change of dress may be dismissed as a means of dating.

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[1] As it is taken by Athenaios (502c), Hoppin, and, apparently, How and Wells, among others.

[2] How and Wells *ad loc.*; cf. also Macan *ad loc.*

[3] *IG* iv 1588, *BPhW* 1901, 1597.

[4] So also Hirschfeld in *RE* i 965; Johanna Schmidt in *id* xvii 2082; Cockerell, *The Temples of Jupiter Panhellenius at Aegina etc.* suggests Palaiochora.

[5] cf. *Perachora* i. 55.

[6] See, however, *Tiryns* i 102 (miniature kantharoi and cups).

[7] Payne, *Archaic Marble Sculpture* p. 17.

Dress-pins have rarely been found in Attica. There are none on the Acropolis; for some reason, it was not the custom to dedicate pins or fibulas to Athena.[1] They are found in geometric graves,[2] not later; this agrees with the custom outside Attica, where pins are seldom found in post-geometric graves. But they were worn; as an example one need only quote the François vase.[3] Their absence among the dedications on the Acropolis is sufficiently remarkable to call for an explanation. In antiquity it found one, which explained not only why pins were not dedicated, but also that they were not worn.

Elsewhere dress-pins are dedicated commonly, especially in the Dorian sanctuaries of goddesses; those at the Argive Heraion are published in *AH* ii 207 ff., those at the archaic temple of Aphaia in *Aegina* pp. 397 ff. The fifth-century inventory of the temple of Mnia and Auzesia names among the not very sumptuous offerings kept there three hundred and forty-six iron περόναι, including fragments.[4] Most of these were separate dedications, a few were pinned in peploi, but the wording of the inventory shews that the pin was more important than the peplos. Iron pins have rarely been found, because the metal keeps less well than bronze. There are some from Aphaia [5] and Perachora,[6] probably of the seventh century, but bronze pins of the same type are much more frequent. Other iron pins have bronze heads.[7] περόνη will include, as well as straight pins, the bronze objects conventionally called 'spits',[8] which appear to be a swollen form of pin used for dedication. Some of them at least could be worn; pins with three discs or globes near the head are worn by two of the Moirai on the François vase.[9] It is precisely the globes on the shaft which differentiate 'spits' from pins. These also are very common objects of dedication in the north-east Peloponnese, and some examples are huge; one from the Argive Heraion is 68 cm. long,[10] one from Perachora over 60 cm.[11]

Neither pins nor 'spits' have a standard size, either of length or weight.[1] There is no evidence of an abrupt change in size. Seventh-century pins are in general heavier and more complicated than Geometric pins, and the later types tend to be of heavier fabric.[2] But there are very large and heavy ' spits ' of the Geometric period; those from Perachora [3] and Tegea [4] may be adduced because their date is certain. It would be impossible to specify any point at which either the standard size, or the general size, of περόναι was increased. A gradual tendency to increase in weight, offset by many abnormal examples, would hardly have been recognised over a century after the process had reached its end. Herodotos says that the pins worn in his own time were larger than they used to be. But, while recognising that his statement is a product of true archaeological method, we may doubt whether he had sufficient evidence about their former size.

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[1] A. de Ridder, *Bronzes de l'Acropole*, 83; Blinkenberg, *Fibules Grecques et Orientales* 19, 149.

[2] Two good examples in Toronto, *JHS* 1931 166 figs. 2–3.

[3] Cf. Studniczka, *Beiträge zur Geschichte der Altgriechischen Tracht* pp. 98 ff.

[4] For iron dress-pins in a sixth-century grave at Aigina see G. Welter *AA* 1938 496.

[5] *Aegina* pl. 114, 49–52.

[6] *Perachora* i 190, pl. 86, 29.

[7] *AH* ii 234–5; *Perachora* i 174.

[8] *AH* ii 300 ff.; Payne *Perachora* i 72; examples from Aigina *ibid.* n. 4.

[9] *FR* pl. 1–2.

[10] *AH* ii 301 no. 2287.

[11] *Perachora* i 175.

One is immediately reminded by the statement about the μέτρον of the pins of another celebrated passage of Herodotos: vi, 127, 3, Φείδωνος τοῦ τὰ μέτρα ποιήσαντος Πελοποννησίοισι. This may not be coincidence. Though pins as worn had no definite μέτρον, another sort of iron object had a definite size, weight, and value, and was dedicated in those sanctuaries where dress-pins are most common: the iron spit which was the pre-Pheidonian currency.[5] Other iron objects seem once to have had currency value;[6] spit-money and hook-money may well have been current together at Corinth.[7] So it is possible that pins also had a value, which might be derived from their frequency as a women's dedication. Pin-money beside spit-money is not impossible, in Argos and Aigina. When Pheidon called in iron and replaced it by silver, the new currency was based on spits and handfuls of spits. We do not know the relation of Pheidonian to pre-Pheidonian μέτρα.[8] The standard may or may not have been changed. Even if it were not, by substituting a silver obol for an iron one four hundred times as heavy, Pheidon might be said to have changed the standard of spits. In no sense could he be said to have changed the standard or value of pins as a unit of currency. But if pins and spits were ever current together, the change in spits may have been thought by confusion to apply to pins too. Spits and pins are not like enough in form to be confused, even if we suppose iron pins, like bronze, to have grown to a great size for dedication: that pins, not spits, were dedicated to Damia and Auxesia is clear from the temple inventory, where some of them are said to be pinning up peploi. So such a confusion could arise only if pins had once had a μέτρον κατεστεός and currency value. The degree of the change can hardly be explained by referring to a hypothetical change of standard on Pheidon's part. It may refer, by another confusion, to the ratio of the Aiginetan drachma to the light drachma of Euboic standard, which might loosely be said to be half as heavy again; [1] or even to Solon's alteration of the Attic standard.[2] There is no direct evidence for this hypothesis, but it is to some extent corroborated by the interpretation of the figure ' half as much again ', and it gives a meaning and direction to the statement about the size of the pins which cannot be satisfactorily explained with reference to the pins we possess.

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[1] Ure, *op. cit.* pp. 170–1, thinks it reasonable that pins should have a standard size. I can only say that in the thousands preserved no standard is discernible.

[2] Cf. Payne, *Perachora* i 70, 172 ff.

[3] *id.* p. 72.

[4] *BCH* 1921 378–9 figs. 40–1.

[5] See references in *Perachora* i 258 ff. 187 ff. These iron spits have no relation to the bronze objects just discussed, which are conventionally, probably wrongly, called by the same name.

[6] Cf. Svoronos, *Journal International d'Archéologie Numismatique* 1906 pp. 153 ff.

[7] *Perachora* i 189–90; for hook-money see also Laum, *Das Eisengeld der Spartaner*.

[8] Seltman's estimate of the ratio of iron to silver (*Athens, its History and Coinage*, pp. 116 ff.) is not concerned with the possibility that Pheidon changed the standard.

The archaeological evidence thus fails to provide, or even confidently suggest, a date for the war. At the most, the doubtful relation of the change of size of pins to Pheidonian measures may suggest a date, or rather might be used as confirmation if there were other reasons to associate the war with Pheidon. One other more general line of argument has been suggested by Ure. The general state of Attic pottery in the first half of the seventh century, and particularly its distribution, suggests that Attica was backward and in decline. Attic Geometric is exported in small quantities, but widely.[3] Protoattic does not go beyond Attica, Boiotia, Aigina, Perachora, the Argolid.[4] The Geometric export is not necessarily evidence of a wide commerce, for it is spread over a long period and is rather sporadic. But the limited range of Protoattic, as compared not only with Protocorinthian but also with some Cycladic fabrics, shows that Attica did not share in the great expansion of Greek commerce. She had no colonies, nor interest in other cities' colonies. Moreover, her imports fall off. There is much Protocorinthian pottery of the second half of the eighth century found in Attica, and close relationship is proved by the extent of the influence and imitation of Protocorinthian in Attica. After the beginning of the seventh century, imports and imitations fall off, and are resumed in quantity only in the middle of the century.[5] Attic pottery of the late eighth and early seventh century is backward when compared with Protocorinthian; [6] the chronology of other fabrics is not determined accurately enough to make a comparison. There is a good deal of crudity, though also independence, in Early Protoattic, and the orientalising elements are slowly brought to order.[1]

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[1] Cf., Ure *op. cit.* p. 171. The ratio is *c* 93–67 (cf. Head, *HN*² p. 367).

[2] Ar. *Ath Pol*, 10; Androtion ap. Plut. *Solon*, 15.

[3] Pfuhl, *MuZ* i, 72; Payne *NC* 1; Kunze, *Kretische Bronzereliefs* p. 262.

[4] J. M. Cook, *BSA* xxxv, 204; the jug in Copenhagen, said to have been found in Cadiz, must remain doubtful.

[5] I shall present elsewhere a detailed account of these relations.

[6] J. M. Cook, *op. cit.* p. 203 wishes to bring down the date of some Early Protocorinthian vases. I hope soon to discuss at length the chronology of Protocorinthian in relation to the dates of the foundation of the western colonies. In the meantime, I see no reason to

There may be many reasons for Athens' commercial backwardness. Attica is large among Greek states, and the soil is by no means as poor as has often been said. So the Athenians were not driven by hunger to commerce and colonisation, and yet became wealthy enough in the middle of the seventh century, as is shewn by the luxurious grave-monuments and offerings of the Kerameikos and Vari. Probably the Athenian aristocracy preferred to live on their lands and discourage trade; the interest of the Corinthian aristocracy in trade[2] was something unusual. The falling off of Protocorinthian imports, and the disregard of Protoattic potters for Protocorinthian example, suggest that close relations between the two states were discouraged. Yet close and continuous relations were maintained with Aigina, another of the leading commercial states of the time, as is shown by the copious finds of Protoattic pottery there. It would be a paradoxical conclusion if, to anticipate the date in the early seventh century which I shall propose for the war between Athens and Aigina, one consequence of Aigina's victory were that she imported Attic pottery in great quantity, and perhaps even imitated it.[3] The embargo on Attic pottery at the temple of Damia and Auxesia might be expected to have affected its ordinary use in Aigina; but since there is no room for a general embargo in either the seventh or the sixth century, that difficulty applies to any date that may be suggested. A break of a year or a few years covering the actual period of the war could not be detected in even so rich a series as the Protoattic pottery from Aigina. We must conclude that the Aiginetans did not bear a general grudge against the Athenians, or at least not against those potters of whose production they seem to have bought a large proportion.[4] The later wars between Athens and Aigina did not prevent some Athenians being very welcome in Aigina in the intervals of peace: notably Melesias the trainer of athletes.

To return to the arguments for an early seventh century date: the question of sea-power is important. In the eighth century Athens was a naval power.[5] If she were one in the seventh century, we should expect

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question the accepted dates for colonies or Protocorinthian, nor to doubt that innovations of style and subject were introduced appreciably earlier at Corinth than at Athens.

[1] Attica's isolation is also to be seen in her failure to adopt the Dedalic style in sculpture and terracottas, the common style of the most progressive regions of Greece; cf. Jenkins, *Dedalica* pp. 22 ff.

[2] Strabo p. 378; Aelian *VH* i 19.

[3] Aiginetan imitation of Protoattic is suggested by Gebauer, in *CVA* Berlin i 5.

[4] All the extant works of some Protoattic workshops have been found in Aigina, others about contemporary (*e.g.*, the Mesogeia painter) are not represented there. But this may be due to the accident of discoveries.

[5] Cf. Ure, *op. cit.* pp. 321 ff.

her to be also a commercial power, which she was not. There is no evidence from vase-paintings, as there is in the eighth century; the πρυτάνιες τῶν ναυκράρων are important officers of state,[1] and would be expected to have to do with the fleet, but as they had other functions too, their naval duties may have been slight. Once again, the Corinthian development of a new type of ship meant that Athens took a back place.[2] Their acquiescence would be more easily explained if they had suffered the loss of a whole expeditionary force. Again, such a crushing defeat might be a deciding cause in their abstention from foreign trade, taken with the general considerations already mentioned. But before it is possible to explain Athens' backwardness in the early seventh century by means of this defeat, it is necessary to find more definite evidence of the date of the defeat.

There are many early elements in the story, some of which may go back long before the time of the war; there are also anachronisms, but, as Macan points out, they are less material.[3] The relations of Athens, Epidauros and Aigina, however, are conclusive for an early date. Epidauros owes a religious rent to Athens; Aigina is subject to Epidauros, but builds ships and breaks free; Aigina becomes involved in war with Athens, and defeats her with Argive assistance. The dependence of Aigina on Epidauros probably dates from the Dorian conquest;[4] it is inconceivable after the middle of the seventh century, when Aigina was so important a commercial power. The relations of Athens and Epidauros agree with their common membership of the Kalauric League,[5] which is early, though of course not dateable; but these relations may go back to a period long before the outbreak of the war. Such religious duties may continue for centuries after political bonds have been broken, but in this case the Epidaurians refused to pay after the revolt of Aigina, which, as I have just said, cannot be later than the middle of the seventh century. The Argives appear in Aigina to take up Aigina's quarrel; this suggests that they are in some sense the overlords of Aigina, and implies, on geographical grounds, that they are masters of Epidauros. Argos asserted religious claims over both Epidauros and Aigina as late as the fifth century,[6] but can have controlled both at only one period after the dark ages: the reign of Pheidon. I regard the dating of Pheidon in the first half of the seventh century as sufficiently positive to need no new argument.[1] It has been suggested that the subjection of Aigina to Epidauros is to be regarded as Pheidon's way of controlling Aigina, and the revolt is connected with his fall.[2] This is improbable, because the Argives are hardly likely then to have been willing or able to help Aigina if she became involved with Athens as a result of her revolt. It is much more likely to belong to a period of Argive expansion than to one of exhaustion. Any date later than immediately after Pheidon's death is ruled out by the improbability that Aigina, now one of the chief commercial powers of Greece, and no doubt also a naval power, would be subject to Epidauros.

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[1] Herod. v. 71.

[2] Herodotos' use of τριήρης in v, 85 may well be an anachronism, as Macan suggests, and does not imply that Athens had a fleet of triremes at the time of the Aiginetan War.

[3] *Herodotus iv–vi* vol. i 227. The inquiry of the Delphic oracle is probably also an anachronism.

[4] Herod. viii 46; Paus. ii 29, 5. Pind. Ol. viii 39; Pyth. viii 29 say that Aigina was conquered by Argives, without naming Epidauros.

[5] Strabo p. 374.

[6] Epidauros, Thuk. v 53; Aigina, Herod. vi 92.

One may perhaps venture on a reconstruction of the course of events, with Pheidon always in the background. Epidauros and Aigina together will have been no inconsiderable power, if opposed to Argos. When they split, Argos was able to conquer Epidauros; Aigina became involved in war with Athens, the chief power of the Saronic Gulf, and had to call on Argos for help. It may even be that Pheidon encouraged the Aiginetans to revolt from Epidauros and place themselves directly under his protection; it would not be unreasonable if, as well as setting up a mint there, he encouraged them to build ships, because a fleet would be more useful to him there than in the Gulf of Nauplia. This is hazardous; but at least there is good reason to associate the Argive intervention in Aigina with Pheidon. The events from the revolt of Aigina to the Athenian defeat are not likely to have covered a long time. Pheidon's assertion of the traditional Argive hegemony over Epidauros, and his setting up of a mint on Aigina, should be among the earlier events of his career of conquest, and belong more probably in the first than the second quarter of the seventh century. With such a date for the defeat of the Athenians the general condition of Athens agrees very well. Their weakest period, artistically and commercially, is the first quarter of the seventh century; before the middle of the century their potters are the equal of any in Greece, except in some respects only the Corinthians, their economic life has begun to revive with the resumption of imports from Corinth, and they are certainly wealthy and given to luxury. Considering that their defeat was serious enough to be remembered over two centuries later, we may reasonably associate it, as cause or affect, with this decline.

T. J. DUNBABIN.

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[1] Ure, *op. cit.* pp. 154 ff.; Wade-Gery, *CAH* iii 761–2; see also the forthcoming publication of Blakeway's lectures. The solid arguments for this date are not affected by cutting away the confirmation which Ure finds in the date of the Aiginetan war.

[2] Macan, *Herodotus iv–vi* vol. ii 106.

COUPE DE BRONZE CHYPRO-PHÉNICIENNE TROUVÉE EN GRÈCE.

(*Musée du Louvre.*)

Il y a bien près d'un siècle que l'attention des archéologues fut attirée par des coupes de bronze ou d'argent, parfois doré, découvertes d'abord à Nimroud puis à Chypre. Dès 1855 Fr. Lenormant émit l'avis que les coupes de Nimroud étaient d'origine phénicienne.[1]

En 1876, une tombe au voisinage de Palestrina fournit un véritable trésor: objets en or, argent, electrum, argent doré, ivoire, bronze et fer, parmi lesquels deux coupes l'une anépigraphe en argent doré, l'autre en argent avec inscription phénicienne. Le tout fut attribué à l'art phénicien par Helbig.[2] Fr. Lenormant fut également d'avis que la plupart des objets portaient la marque de l'industrie phénicienne et plus spécialement carthaginoise.[3] La coupe de Palestrina en argent doré fut brillamment expliquée par Clermont-Ganneau, du moins quant à la frise principale: prince sortant en char de sa ville fortifiée pour aller chasser le cerf dans la montagne, sacrifice aux dieux, attaque par le génie de la montagne figuré en singe, rentrée dans la ville fortifiée.[4]

En 1912, pour définir l'art phénicien, M. Fr. Poulsen trouvait le meilleur de sa documentation dans les coupes historiées mises au jour depuis Nimroud jusqu'en Italie.[5] Entre temps, M. von Bissing avait démontré, ce qu'on avait contesté bien à tort, que le prototype de ces patères était à chercher en Egypte dès la XVIII^e^ dynastie.[6]

Bien que l'on puisse présenter quelques corrections de détail à la démonstration de M. Fr. Poulsen, il n'est pas douteux que l'industrie phénicienne a pris une grande part à la fabrication de ces pièces de métal qui ont connu une si large diffusion. Mais il ne faut pas négliger la part de

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[1] *Journal asiatique*, 15 1855.

[2] *Bulletino dell' Instituto di corresp. archeol.*, 1876, p. 126 et suiv.; *Annali dell' Inst.*, 1876, p. 248 et suiv.

[3] *Comptes-rendus de l'Acad. des Inscript.*, 1876, p. 264–70. L'étude de ce matériel a été reprise par Fr. Poulsen, *Der Orient und die frühgriechische Kunst* (1912), p. 118 et suiv.

[4] 'La Coupe phénicienne de Palestrina,' dans *L'Imagerie phénicienne*, I^ère^ partie, 1880. Résumé dans Perrot et Chipiez, *Histoire de l'art*, III, p. 757 et suiv.

[5] *Der Orient und die frühgriechische Kunst.*

[6] *Arch. Jahrbuch*, XIII (1898), p. 28–56 (Eine Bronzeschale myken. Zeit); XXV (1910), p. 193–99 (Aegyptisch oder Phoinikisch?).

Chypre, qui a été considérable[1] et qui se distingue par certaines particularités d'inspiration mycénienne, bien qu'à l'époque où ces coupes furent le plus en faveur (VIII–VI^{e}s.) une certaine fusion se soit opérée entre l'art phénicien et l'art chypriote. La grande île était alors en partie occupée par les Phéniciens. Non seulement un nombre important de ces coupes ont été trouvées à Chypre même, mais récemment une inscription phénicienne, découverte à Larnax Lapithou, témoigne de la prodigalité avec laquelle de tels objets étaient offerts dans les temples de Chypre, probablement à cause de leur emploi dans les libations.[2]

Par contre, aucune de ces coupes, classées comme phéniciennes, n'a été trouvée en Phénicie même. Huit de ces patères portent des épigraphes en alphabet sémitique, mais deux de ces textes seulement sont phéniciens, les six autres araméens. Et des deux textes phéniciens l'un consiste en une dédicace gravée à Chypre par le gouverneur tyrien d'un district chypriote, l'autre a été trouvé à Palestrina et pourrait être d'un Carthaginois. D'ailleurs, ces inscriptions désignent le dédicant et non le fabricant.

Mais voici que M. Cl. Schaeffer a mis au jour dans ses fouilles de Ras Shamra une belle coupe en or[3] qu'on peut tenir pour un produit de l'industrie phénicienne et qui fournit, au XIV^{e} siècle avant J.-C. un prototype excellent des patères phéniciennes postérieures. On y relève la préoccupation de donner un sens aux scènes représentées. Ici c'est, en accord avec les textes de Ras Shamra, l'exaltation des cultes naturistes. On y voit les animaux terrestres ou divins vénérer la plante sacrée qui a déjà pris la forme stylisée d'une sorte de palmette. Sur la frise circulaire principale, nous distinguons les animaux attributs des divinités phéniciennes et, à leur suite, une interprétation de la lutte des saisons telle qu'elle est décrite sur les tablettes.[4]

Nous pensons toujours que les coupes dites phéniciennes ont un air de famille qu'explique l'unification des tendances artistiques dans le Proche Orient à l'époque assyrienne, bien qu'il faille admettre divers centres de fabrication dont Chypre est un des principaux.[5]

Précisément la coupe de bronze que nous publions en l'honneur du maître des études chypriotes, le professeur Myres, bien que trouvée en Grèce, a très probablement été fabriquée à Chypre. Inscrite dans l'inventaire du Musée du Louvre sous le N°. AO. 4702, la coupe que nous reproduisons (fig. 1) d'après un dessin fort étudié de Mlle. de Mertzenfeld,

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[1] Voir *Civilisations préhelléniques*, 2^{e} édit. ‘Art chypriote et art phénicien,’ p. 303 et suiv.

[2] A. M. Honeyman, ‘Larnax Tes Lepethou.’ A third Phoenician inscription, dans le *Muséon, Revue d'études orientales*, t. LI (1938), p. 285–98.

[3] Cl. Schaeffer, *Rapport de la cinquième campagne* (1933), dans *Syria*, 1934, p. 124 et suiv., pl. XV.

[4] *Les Découvertes de Ras Shamra (Ugarit) et l'Ancien Testament*, p. 39 et suiv.

[5] *Les Civilisations préhelléniques*, 2^{e} éd., p. 310.

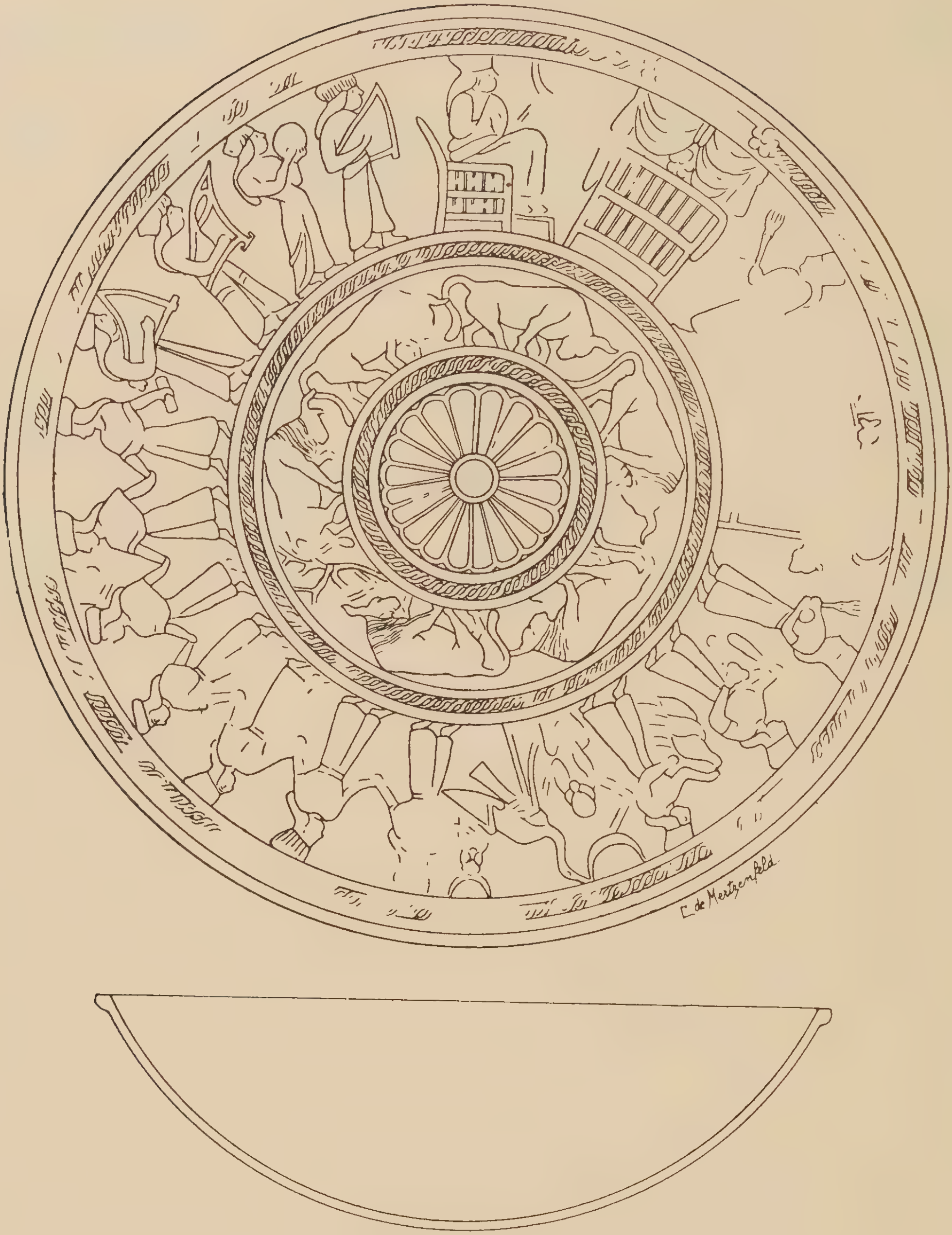
C. de Mertzenfeld

FIG. 1.—COUPE DE BRONZE CHYPRO-PHÉNICIENNE TROUVÉE EN GRÈCE.
(*Musée du Louvre.*)

mesure 0·195 m. de diamètre et une hauteur de 0·065 m. Trouvée en Grèce, probablement à Sparte, elle a été acquise par le Louvre en 1910. Les figures, travaillées au repoussé, décorent l'intérieur de la coupe, mais la surface du bronze est tellement oxydée qu'en plus d'un point le décor a complètement disparu ou reste douteux.

Au centre, une rosace est entourée d'un tortil. Puis vient une frise de taureaux qui se suivent. On remarquera l'inclinaison de la tête de ces animaux qui n'est pas sans analogie avec la pose des taureaux de la coupe en or de Ras Shamra où elle apparaît comme un hommage rendu à la plante sacrée.

La grande frise, disposée entre deux tortils, figure une déesse assise sur un trône à dossier, les pieds sur un escabeau, avec devant elle un autel surchargé d'offrandes. De l'autre côté de l'autel se devine une officiante. Derrière la déesse un groupe de quatre musiciennes, trois jouant d'une sorte de harpe, une du tambourin. En arrière des musiciennes et leur tournant le dos une procession de sept(?) femmes se tenant par la main. Devant la première de ces femmes le décor est fort imprécis: le dessin que nous reproduisons montre une sorte de grue qui tendrait le bec vers le croissant lunaire. Nous ne distinguons pas nettement ce détail et il nous paraît insolite. On croit voir ensuite des porteurs d'offrandes. Sauf les musiciennes qui se tiennent derrière la déesse, toutes les autres figures se dirigent vers l'autel placé devant la déesse.

Si nous inclinons à attribuer la fabrication de cette coupe à un atelier chypriote, c'est par comparaison avec la coupe d'Idalie[1] où le même sujet est traité et où les femmes portent la même coiffure. A Idalie, la déesse, assise sur un trône à dossier, tient le lotus dans la droite et un fruit dans la gauche. La coupe du Louvre ne laisse plus apercevoir les attributs de la déesse. A Idalie il n'y a que trois musiciennes derrière la déesse: joueuse de double flûte, harpiste et joueuse de tambourin. Une prêtresse offre le sacrifice disposé sur une table à trois pieds; une table à quatre pieds porte deux cruches de type chypriote. Le reste du décor est constitué par une procession de femmes se tenant par la main et se dirigeant vers l'autel. Sur l'une et l'autre de ces coupes n'apparaissent que des femmes et il n'est peut-être pas aventuré de reconnaître dans l'objet de leur culte, l'Aphrodite chypriote. La particularité de la coupe du Louvre est d'avoir été trouvée en Grèce comme la patère dite du Varvakeion dont le décor, bien qu'affectant un autre dispositif, n'est pas sans analogie.[2] L'inscription araméenne gravée sur la patère du Varvakeion ne détermine que l'origine du dédicant et la date du VI^{e} siècle; la fabrication chypriote de l'objet est attestée par le motif du griffon poignardé si fréquent dans l'imagerie de la grande île.

René Dussaud.

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[1] Clermont-Ganneau, *L'Imagerie phénicienne*, pl. V.

[2] Perrot et Chipiez, *Hist. de l'art dans l'antiquité*, p. 783, avec dessin d'après l'original.

ROUGH STONE MONUMENTS IN WESTERN EUROPE

Professor Myres has helped his students and fellow-workers to see the bearing of one subject upon another, and to suggest social factors of archaeological sequences and links between archaeological data and distributions of human types. His is not a mind that is compartmented, it ranges vividly and rapidly over wide fields, and suggestive thoughts spring forth in quick succession, often to be accepted, always to stimulate further work. It therefore seems appropriate to offer here, as a tribute to him, a review of some aspects of the problems of the distribution of rough stone monuments, a subject which, sometimes half unconsciously, he has on occasion illuminated with flashes of intuition and acute criticisms that have helped to lift thought on the subject out of certain ruts into which it had been inclined to sink.

Worsaae, Montelius, Sophus Müller, Siret, Coffey, Déchelette, Elliot Smith and Perry and others have thought the rough stone monuments were expressions in outlying regions of ideas derived from the eastern Mediterranean, while some other authors tried to derive them from the west Baltic, where they are numerous, and still others have thought that, while the ideas might come from the eastern Mediterranean, they were first expressed, so far as western Europe is concerned, in the humbler monuments which are numerous in the interior of Portugal. Many of these workers sought to trace an evolution of styles from the humbler monuments, usually poor in furnishings, to the elaborate ones with richer furniture, thus emphasising a supposed progressive development of the monuments in western and north-western Europe. The humbler monuments often consist of a few standing stones supporting a capstone of considerable size. Other monuments shew an entrance passage, lined by standing stones and covered by a succession of capstones, leading into a chamber with a wall of standing stones and one or a few large capstones. Still others shew a chamber the roof of which is a corbelled dome, and these may also have side-chambers and other complications. Other fashions in these monuments have become better known in recent years, but it seemed possible to the pioneers to think of the humbler monuments as the early ones and of the monuments with corbelled roofs as results of the development of skill. This view seemed to be supported by the fact that, in the humbler monuments of the interior of Portugal, the scarce finds were mostly of poor stone implements which in the words of Wilke (*Reallexikon der Vorgeschichte*, Bd. 8, p. 80) ‘sich . . . auf die nach paläolithische Kultur der Gebiete s. und. n. der Pyrenäen zurückfuhren lassen.’

The hypothesis however met with considerable difficulties.

1. Monuments of humble type in Aveyron, etc. (South France) have yielded bronze pins, and Childe has suggested a valuable interpretation of this that will be mentioned later. Wilke, noting finds of relatively late date, suggested (*op. cit.*) that 'diese einfachen Steinkammergräber auch noch in den jüngeren Perioden neben den entwickelteren Grabformen . . . in Gebrauch blieben,' and some, including the present writer, would feel that this is a reason for a certain amount of reserve with regard to the theory of progressive evolution of styles from humble to more elaborate. In Denmark, too, bronze finds have been gathered from some monuments of humble styles, as also stone implements that may well be copies of metal prototypes. In several cases one cannot be quite sure that the relatively late, *e.g.*, bronze age or later, objects were put into the monument when it was originally built. We have cases of Iron Age and even early mediaeval activities affecting these monuments. The arguments from finds in the monuments are thus not as conclusive as one might wish. They nevertheless suggest reasons for hesitation about complete acceptance of the progressive evolution hypothesis and of the early date of all the humbler monuments.

2. A greater difficulty in the path of the hypothesis is the fact that there is too much similarity between the styles of corbelled-chamber tombs in the Iberian peninsula, Brittany and the British Isles, to make the idea of independent evolution easily acceptable. Nor is it easy to imagine successive spreads of successively more elaborate styles. Moreover, the corbelled chambers of western Asia and the Cretan Mesara (S. Xanthoudides and J. P. Droop, *Vaulted Tombs of the Mesara*, 1924) apparently led on to the magnificent corbelled tholoi of Mycenae. Could that all be an independent evolution?

3. Reasons for the development of what must have been a vigorous civilisation are difficult to guess at if we take such a region as the interior of Portugal to be a, or the, primary home. That ideas spreading thence should acquire powers of overseas expansion, as well as of great elaboration of styles, on reaching the coast seems hard to understand, especially in view of the points noted in (2) above.

As to the first point it is increasingly felt that finds in monuments are capable of several interpretations, and few students would now feel certain that a monument belonged to the Neolithic period merely because the finds obtained from an examination of it included stone tools but no metal ones. Absence of metal may be due to fashion or to religious scruples (see Exodus xx. 25, Deuteronomy xxvii. 5, Joshua viii. 31). One must also repeat what was said above, namely that objects may have been placed in monuments many centuries after they were built.

As to the second and third points, Le Rouzic, Forde (*American Anthro-*

pologist, XXXII, 1930, especially pp. 53 ff.), Fleure and Peake (*Journ. Roy. Anthr. Inst.* LX, 1930) and, later, E. E. Evans and M. Gaffikin, G. Daniel, and A. Mahr have all suggested that the old hypothesis reads the evolutionary sequence the wrong way about. If we start with the elaborate passage-and-chamber type, and especially the variety with corbelled roof, which in the west is most often found near places of entry from the sea, we have (*a*) at least a distant analogy with the vaulted tombs of the Cretan Mesara which are probably old enough to antedate most of the western monuments and (*b*) a simple explanation of the resemblances between these corbelled-roof chambers with entrance passages, as they are noticeable when monuments in the Iberian peninsula, Brittany and Ireland are compared. Further, as it is evident that the art of corbelling is a difficult one, we can understand that in less skilled hands, the tendency could well be to replace the corbel by great capstones, such as were already in use for covering the entrance passage. Further changes, in poorer districts, might be the shortening of the entrance passage and even its disappearance, leaving us with the humbler monuments. The humble and apparently simple church of a remote upland village is by no means necessarily older than the elaborate cathedral of the city at the head of navigation of a river; it is far more often an expression of relative poverty. If, as the last-named set of writers think, the idea of the elaborate monument was what was introduced, presumably from the eastern Mediterranean, the partial parallelism of the process of decline or simplification in various parts of the west is easy to understand. The fully skilled migrants might well be few in number and the art of corbelling might die out, as several arts have died out in Melanesia and Polynesia. With reduction of skill, the substitution of capstones for a corbel and the occasional retention of a little bit of corbelling are quite natural features, as also the shortening of the passage and a general reduction. We thus plead for a reading of the evolution of these monuments as including a great deal of what may be called degenerative reduction. At the same time one must be on one's guard against any theory that would place all the monuments at stages of one evolutionary sequence. There are several types and while much still remains to be studied, it is clear that their distributions as well as their styles indicate diversities of tradition that bespeak diverse groups of migrants moving at about the same period. We must also maintain a reserve in face of any hypothesis that would make the different types of rough stone monuments represent distinct 'cultures.' Indian people who in other respects have many similarities in language, mode of life, utensils and so on may nevertheless be divided among themselves as worshippers of Krishna, Siva or other gods and goddesses. We should not say more than that among the early bearers of ideas of settled life and maritime intercourse who affected western Europe there appear to have been groups with diverse ideas of ceremonial and of symbolism expressed in these monuments, but we must not commit ourselves to the idea of 'one region, one idea;' there is no necessity for '*cujus regio, ejus religio.*'

It may be claimed that, if the hypothesis be used that the more elaborate monuments are among the earliest, with possibilities of reduced or simplified ones at every period early or late, a large variety of facts fall into place and difficulties are reduced considerably.

Glyn Daniel has recently published (*Antiquity* xii pp. 297–310; 1938) a suggestive scheme of evolution of the humbler monuments, traditionally called 'dolmens,' in various ways from more elaborate structures; that is, he makes the so called dolmen polygenetic. Many will agree with him here.

How far the entrance passage is to be considered a special feature of western Europe is a moot point. The building of a passage into a chamber that was buried under a mound made possible a larger mound if the builders desired to keep the chamber central, as they did in some styles. In other styles (*e.g.*, the French and British Long Barrows) the chamber or chambers were not given a central position, the mound was lengthened out far beyond the megalithic construction. The extent of a monument, among most peoples, is part of the glory of the person or family or other group for which it was made. This mention of the entrance passage, which has many variants, is intended to suggest that while the main story of the megaliths may be one of decadence from elaborate models, there are partially compensatory additions and elaborations here and there, often illustrating regional specialisation.

On the whole then we may venture the view that those authors are right who see in the megaliths the expressions of cults of primarily maritime folk. If we pursue distributional evidence a little further, we find that ways across Brittany, Cornwall, Pembrokeshire and Carnarvonshire are as it were spotted with megaliths. Tide-races off headlands were dangerous for small craft and led people to make their way across promontories and isthmuses by land, a habit which persisted on into the Middle Ages (see G. Hartwell Jones; 'Celtic Britain and the Pilgrim Movement', *Y Cymmrodor* XXIII, 1912). Of all these routes the most important was that of the isthmus of South France from the Gulf of the Lion to the Bay of Biscay. Finds of copper and bronze axes shew (M. Dunlop, *L'Anthropologie*, XLV 457–502, 1939) that this isthmian route was much used during the early bronze age, the phases with flat and with flanged axes. As bronze objects are found in humble monuments on the flanks of this isthmian route it is quite possible that those monuments also belong to the Bronze Age, as Childe has well suggested (V. G. Childe, *Dawn of European Civilization*, 1925, pp. 278–81).

There is not space here to attempt a classification of rough stone monuments even if that were a possible task, but it is doubtful whether such an effort would be profitable in a matter in which there are so many and such varied hybridisations of ideas, introductions from a distance and local adaptations in the directions of elaboration and of simplification or reduction. A few points only will be worked out, mainly for distributional reasons.

Megaliths with corbelled domes occur in southern Iberia; there is one at Collorgues near Uzes, Gard, South France. One very large and well-developed example occurs at Ile Longue in Le Morbihan, Brittany and there are some other lesser examples in Brittany and one in Jersey (La Sergenté, St. Brelade). There is one in Calvados, West France, a few have been found in Ireland, the most notable being New Grange, and Maes Howe is a splendid example in Orkney. Fragments of corbelling occur in almost all areas and are well known from some of the more elaborate West Baltic monuments roofed by large cover-stones in the main. It is not intended to imply that each corbelled tomb must be the oldest monument of the passage-and-chamber type in its region, but the scattered occurrence of the type and the unlikelihood of independent evolution of corbelling at many different places make it probable that their distribution indicates maritime connections and the occasional presence of a sufficiently skilled craftsman.

In all the areas concerned in the west of Europe, one finds passage-and-chamber monuments with both passage and chamber roofed by cover-stones, often of very large size. In many cases the chamber-roof is covered by earth or has earth still covering part of it, usually there is earth at least piled against the outside of both passage and chamber, or the space may have been dug out of a slope.

In the interior of Portugal, near the Pyrenees, in the south of the Plateau Central of France, scattered in Brittany and several other French areas, the chambers without passages are perhaps the commonest forms. They are not all homologous. Chambers without passages are the most general forms in Britain where the more elaborate styles, though present, are relatively uncommon. In the West Baltic the passage often leads into a long chamber the axis of which is at right-angles to the axis of the passage, and this feature is occasionally found in the British Isles, notably at Carrowmore, Sligo, Ireland and at Capel Garmon, Carnarvonshire.

In southern France, as Hemp and Daniel have shown, in Brittany and north-west France, the Channel Islands and England and Wales there occur monuments in which the mound is given a considerable extension beyond the passage and chamber, which are typically situated at one end of a long mound. The English variety is called the Long Barrow, and this particular style seems to have spread into Wiltshire via Dorset. It seems just possible that it may be found to be related to the isthmian way across South France already mentioned. The ascription of a specially early date to the long barrows by some authors is based upon the finds in those monuments, but this is a risky argument as has already been suggested. Sometimes there is a smallish forecourt (*v. inf.*) in front of the entry.

In some monuments, especially in western Iberia and Ireland, the passage widens steadily from the entry into the chamber so that passage and chamber are not distinct and the interior space has a wedge-shape.

Long passages, in this case more often called galleries, without expansions into chambers, but sometimes with branch-galleries, are known from the south of France, the Paris Basin and Brittany and in the latter region they may be, according to Forde (' Early Cultures of Atlantic Europe,' *American Anthropologist* XXXII, 1930, pp. 1–100) an extension of a fashion from the Paris Basin. The gallery may be divided by a cross wall which may have a hole in it—commonly called the porthole. There are at least four examples of such a hole in a cross slat in Brittany and one in Jersey. It also occurs in Wales, Belgium, Hesse and south Sweden and may well be a Paris Basin fashion which has spread in most directions, more overland than have been the spreads of most other styles. Its apparent introduction into areas in which other styles are more general suggests a modern comparison with centres where aliens congregate and there are religious edifices of almost all possible types. From many indications we get an impression of diverse groups living near one another and practising their own cults while sharing a largely common culture. In the study of megaliths we seem to glimpse here and there efforts in the direction of the constitution of composite groups.

In northern Ireland, south-west Scotland and its western isles, the Isle of Man, the east Cheshire and Derbyshire hills and Pembrokeshire are monuments with what may be a gallery usually segmented into two to five chambers in linear series, and occasionally still more. Carn Ban in Bute has fourteen of these chambers. In the Bridestones near Congleton (see M. Dunlop, *Trans. Lancs. and Ches. Antiq. Soc.*, 1939, LIII pp. 19–32), as well as in Gretch Veg, Isle of Man, two segments or chambers intercommunicate by a hole worked in the slabs of the cross partition. This suggests that perhaps the ideas of the builders of the galleries mentioned just above may have affected the people who built these monuments. But what most characterises these monuments is the occurrence of a large forecourt sometimes paved and usually either subrectangular or a part of a circle. The forecourt is bounded on the two sides by what are often large standing stones, with specially large ones on either side of an entry, but that entry may be closed. The standing position of the stones flanking the forecourt is not universal; there is only one case (Strathnaver) of this feature in Scotland and a number of Irish examples lack it. This style of monument is generally called the horned cairn or the forecourt cairn. It seems to have associations with some long barrows; Wayland's Smithy

(Wilts) has great standing stones on either side of the entry. Apparently cremation, probably partial cremation, was a rite connected with some of these monuments and there may be additional features (see Fleure and Neely, " Cashtal yn Ard," *Antiq. Journal* XVI, 1936, pp. 373–95). As the Giants' Graves of Sardinia have a forecourt and a long, in this case generally unsegmented, gallery, it has been thought that the fashion spread thence to the north, becoming hybridised in its northern home. Are we in presence of monuments belonging to composite communities, with the segments allocated perhaps to subgroups? This is at present mere speculation.

Circles of standing stones are specially characteristic of the western parts of Great Britain with a distribution somewhat wider and less definitely coastal than those of most other megaliths and varied hints from location and other details that some may be of relatively late date. Mrs. Cunnington's famous discovery of Woodhenge (*Woodhenge*; Devizes 1929) and the Sanctuary, work by several students at Bleasdale, Lancs., and the study of the tenon and mortise scheme of the great trilitha at Stonehenge all suggest a transition from wood to stone as the material used. H. H. Thomas (*Antiq. Journal* III, 1923, pp. 239 ff.) was able to show that sacred stones were brought from west Pembrokeshire to Stonehenge at some time and were set up in many cases within the enclosure bounded by the great trilitha of local sarsen stones. Stone circles are known as bounding lines of passage-and-chamber megaliths in the west, and it is quite possible that the circle without a chamber in the centre represents a combination of ideas from the west with ideas expressed in circles of wooden posts farther east in Britain and in the Low Countries. At Avebury and Arbor Low the circle is enclosed within a ditch and ring-mound.

Alignments of standing stones are another megalithic fashion supremely expressed near Carnac in Brittany in combination with semicircles outlined in stone. There are some grounds for assigning these alignments to the Bronze Age, but a number of other alignments are undated.

These brief considerations concerning morphology and distribution of megaliths reveal a widespread habit of building with great rough stones, sometimes supplemented by unmortared walling. This may well be a ' colonial ' style, worked out in a region where neither the very regular slabs, nor the skill in tooling, nor the possibility of cutting chambers in the live rock, which are Mediterranean features, was available. This use of rough stone may be one of the chief links between the diverse representatives of different cultural or ritual practices that make up the heterogeneous assemblage called megaliths. There were obviously a number of groups of diversified traditions on the move, not all in one direction, when the megalithic styles were developing, and different groups were expanding in different ways, some into untouched areas, some apparently back into regions that already possessed a megalithic tradition. There seem to have been fusions of ideas that suggest the attempt to build up composite communities, perhaps in some cases ' natives ' under a superposed aristocracy that faded in course of time.

The Irish Sea, the coasts of south-west Scotland and some western isles have the forecourt cairn as a special feature. St. George's Channel and south-west Britain form another region with other monuments, notably the passage-and-chamber style or reductions therefrom. Nevertheless some examples of the characteristic style of each area appear in the other. This division of the sea between England and Ireland into a northern and a southern portion was repeated more or less in the distribution of the work of the Celtic Saints, but the work of some of the saints affected both. This interesting thought is due to and is being developed in detail by Mr. E. G. Bowen of Aberystwyth. Central and eastern Cumbria formed another region with links eastwards, probably via Bleasdale and the Aire Gap. The neighbourhood of the Pentland Firth is still another British area. Finistère and Le Morbihan are curiously contrasted in Brittany, though both are rich in monuments. Also the monuments of Finistère have yielded beads of Baltic amber but none of callais, while those of Morbihan, with stronger Iberian affinities, have yielded hundreds of callais beads, another analogy with Iberia, but not a single one of amber. If we take it that the south Breton coast of early megalithic times lay farther out than the present one we can reconstruct its lines and argue that there must then have been a large, well-sheltered entry into the Carnae area. Moreover the sands of the Vilaine have yielded cassiterite (tin-bearing) sand. The The Cevenol–Pyrenean areas on either side of the south French isthmian way is another such area, the Paris Basin another. Bosch–Gimpera and others have suggested regional distinctions in Iberia; and, at the other end, the west Baltic and the Low Countries, while broadly one region, may be subdivided in detail. In south France, the Balearics (W. J. Hemp, ' Rock-Cut Tombs and Habitation Caves in Mallorca,' *Archaeologia* LXXVI, 1936–7), and Sicily many but not all the monuments are rock-cut and not built up. Sardinia and Malta are very special areas with individual styles. Of the megaliths north-east, east and south-east of the eastern Mediterranean, nothing will be said here.

Practically every region shows diversities of type in its monuments and there is not necessarily a predominant type in any one, though often one style is particularly important. In Ireland, for example, Dr. Estyn Evans and Miss M. Gaffikin (*Irish Nat. Journal* V p. 11, 1935) have shown that the forecourt cairn is specially characteristic of and almost confined to the north-east, spreading especially from the entry at Carlingford Lough.

The view that the corbelled chamber is one of the fundamental fashions makes it possible to think of the spread of the idea as being somehow linked with early Minoan maritime activity. It seems also appropriate to mention here that the segmented gallery appears with an architectural forecourt at the tomb of Minos in Crete, and one might speculate on links with supposedly very early monuments at Mochlos in north-east Crete (see R. B. Seager, *Explorations in the Island of Mochlos*, 1912). We need not picture Minoan merchants or wanderers spreading all over the west; the exchanges that grew up may well have been hand to hand in a long chain. What rôle Malta played remains a mystery, it is tempting to speculate on its having been a special depôt perhaps in the hands of monopolists, possibly therefore responsible to some extent for the remarkable lag of nearly 2000 years between the growth of urban civilisation in the eastern and a corresponding growth in the western Mediterranean.

If we could but glean more of the meaning of the monuments we might have many clues to the life of their epochs. The idea of ‘ vital-essence ’ or ‘ soul-substance ’ entering the future mother who came to worship at the sacred place (note I Samuel i) is very widespread, and some features of several, but by no means all, passage-and-chamber monuments suggest a symbolising of the womb of the earth goddess wherein the dead are placed for later rebirth.

The forecourt cairn with its partial or total cremation in several cases is apparently related to a different ideology. The two largest standing stones of the forecourt, right and left of the series of chambers seem so shaped in some instances as to indicate a sexual symbolism, and the forecourt tempts one to think of ceremonial dances such as so often accompany fertility-rites. We may thus be in presence of another form of expression of the ‘ vital-essence ’ idea so widely linked with fertility and good-luck cults, but evidence is lacking.

White quartz beach-pebbles have been found in large numbers in some forecourt cairns. White pebbles were given in antiquity to persons acquitted after trial and, sometimes, to victors, and there is an interesting reference in the Book of Revelations ii. 17. The practice of putting white stones into graves lasted into Christian times and is sometimes thought to have been a sign of justification; the spirits concerned were fit for rebirth and admitted to the sacred place whither the women would come. We know that, among some Indian aborigines, unlucky people, *e.g.*, those killed by tigers, are buried apart, apparently lest their spirits should be reborn.

In Spain, France, Britain and Ireland we find legends of ancient Mediterranean connections that have been too lightly set aside as fanciful compilations against a Virgilean background. The analogies between them and the suggestions about communications that one can make from a study of megaliths are too striking to be neglected. But there is a complication here as the regions and lines of movement of prehistoric megalithic times in some cases correspond closely with those of the maritime intercourse of the late pre-Roman Iron Age and even with some of the age of the Celtic saints and the mediaeval pilgrimages to Santiago de Compostella.

Megaliths need not all be linked with a very early period round about 2000 B.C. Le Rouzic shewed that one of the alignments at Carnac in Brittany passed over a Bronze Age mound. Various complexes of circles and alignments or avenue schemes, monuments which are probably non-funerary, seem relatively late. The veneration of the monuments is actually covertly continued into our own day in connection with fertility customs.

Many thanks are due to Miss Dunlop for help, especially through the use of her collection of plans, etc., of megaliths which she kindly lent me.

H. J. FLEURE.

NOTES ON THE CRETAN GRIFFIN

> ' So we come back to the old question of priority between East and West, and the old obstacle of the No-man's land between Aegean and Danube on the one side, and Aegean and Euphrates on the other.'—J. L. Myres, *The Cretan Labyrinth.*

In the No-man's land between Aegean and Euphrates we find in the second millennium B.C. a monster unknown in earlier times. Without antecedents it succeeded in penetrating the homeland of monsters, Mesopotamia, where it became so thoroughly acclimatised as to outnumber within a few centuries all but the most vigorous native breeds. It also played an important part in the religious imagery of Minoan Crete and in the decorative art of Mycene, whilst occasionally penetrating Egypt and Anatolia. Its appearance suggests an aptitude to insinuate itself: the leonine body ends, not in the blunt head of the great cat, but in a tapering bird's head; and the threat of the formidable beak is masked by a graceful crest.

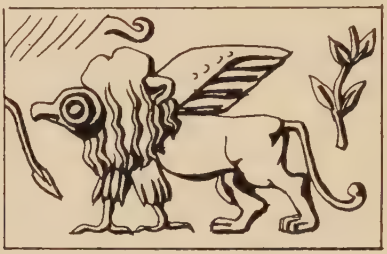

FIG. 1.—SPHINX ON SEALING FROM SUSA, 4TH MILLENNIUM B.C., IN THE LOUVRE.

Whence did it come and what does it signify? The second question may well be unanswerable without regional qualification. Fantastic creatures often undergo profound changes of meaning when changing their habitat; the sphinx is a well-known example of this. But in any case the question of origin must be answered first.

In Mesopotamia mammals with bird-like features were known from the fourth millennium onwards. Amongst the sealings from Susa, which belong to the Uruk- and Jemdet Nasr Periods, we find the only known griffin with the mane of a male lion; it has a bird's head, wings, and talons on its front legs (Fig. 1) [1] and, like the other Elamite monsters of this period, it disappears without leaving a trace.

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[1] See DELAPORTE, *Catalogue des Cylindres Orientaux, Musée du Louvre* Pls. 44, 10; 45, 2 for photographs.

The Sumerians of the Early Dynastic Period knew a winged lion as well as the lion-headed eagle Imdugud (Fig. 2); twice they depicted a bird-man (Fig. 2), possibly holding a plant, which in the succeeding, Akkadian, period he was punished for owning.[1] Dragons, too, combined the features of birds and beasts. The 'lion-bird' of Ningizzida, a chthonic god, had a snake-like head and neck, a lion's body and talons on its hind legs, as well as a feathered tail (Fig. 3). It became Marduk's symbol in later times. The Akkadians pictured the weather god in a thundering chariot with solid wooden wheels drawn by a winged, tailed, and taloned dragon which spat fire (Fig. 4); and this creature remained associated with the god until the end of the Assyrian empire.[2] In addition to the

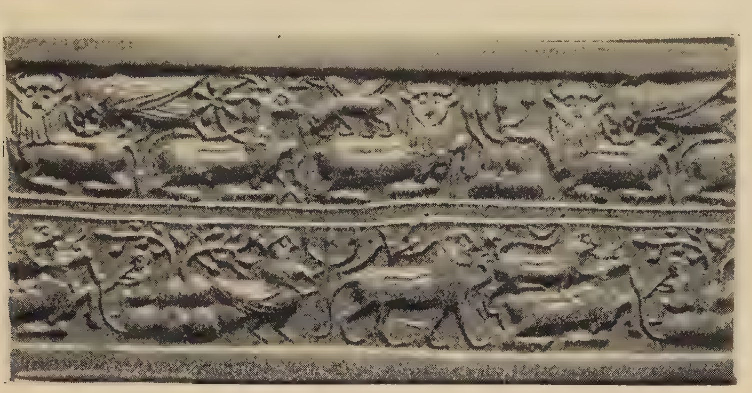

FIG. 2.—EARLY DYNASTIC CYLINDER FROM UR IN BAGHDAD MUSEUM.

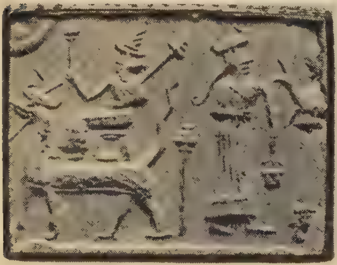

FIG. 3.—AKKADIAN CYLINDER WITH CHTHONIC GOD, IN THE ASHMOLEAN MUSEUM.

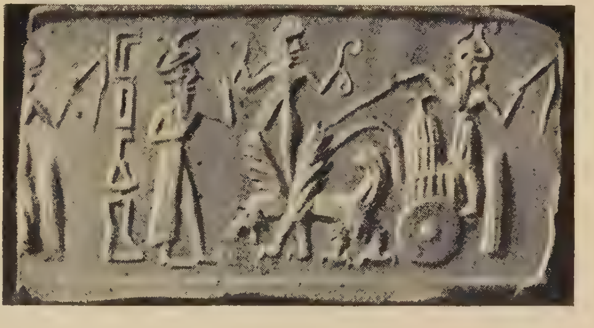

FIG. 4.—AKKADIAN CYLINDER FROM UR WITH WEATHER-GODS, IN THE BAGHDAD MUSEUM.

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[1] FRANKFORT, *Cylinder Seals* pp. 132 ff.; the other Early Dynastic seal with the bird-man is in Baghdad: IM, 2479.

[2] *E.g.*, BUDGE, *Assyrian Sculptures in the British Museum*, XXXVII.

bird-man already mentioned we find on Akkadian seals a winged god dominating three mortals (Fig. 5); his female counterpart is probably shown on a fine terracotta relief of slightly later date.[1] These creatures may possibly help us to explain the griffin, but none of them can be considered its ancestor. But when, after the middle of the second millennium, Assyria emerged as a political and cultural centre independent of the south, our griffin and its humanised counterpart belong to the most conspicuous features of the new artistic repertoire. They appear in the wall-paintings of Kar-Tukulti-Enurta (about 1280 B.C.)[2] and on the seals of King Assuruballit I (1405–1385 B.C.) (Fig. 6) and Rimeni (about 1140 B.C.) (Fig. 7). The griffin-demon obviously fulfils there a beneficial function, and this part it retained throughout Assyrian art. On the wall-reliefs of the Assyrian palaces it acts as guardian of the vital power contained in the sacred tree, or it transmits this power to the King (Fig. 8). The griffin, however, appears sometimes in less exalted situations (Figs. 9, 10). This may complicate the problem of its interpretation,[3] but for the moment we merely want to stress the common occurrence of these two related figures in Assyrian art from the fourteenth century onwards, while they were entirely unknown in Babylonia. From the Assyriological point of view there is

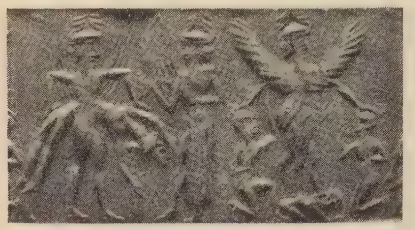

FIG. 5.—AKKADIAN CYLINDER FROM UR WITH DEATH-BRINGING GOD.

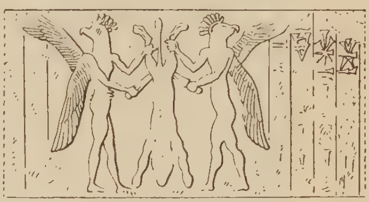

FIG. 6.—SEALING OF KING ASSURUBALLIT, IN BERLIN MUSEUM.

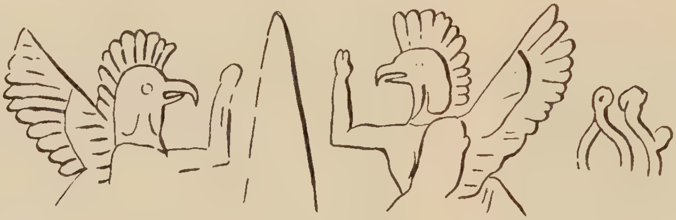

FIG. 7.—SEALING OF QUEEN RIMENI, IN BERLIN MUSEUM.

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[1] *Archiv für Orientforschung* XII 128 ff.

[2] ANDRAE, *Coloured Ceramics from Ashur* Pl. III.

[3] See below.

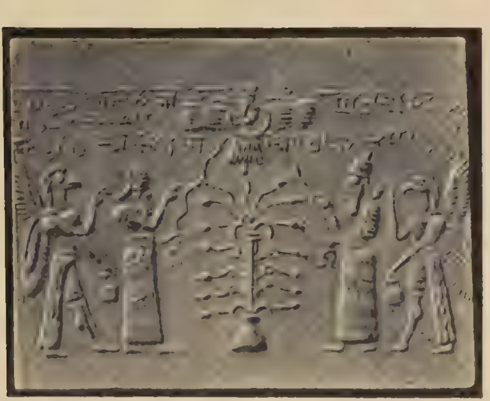

Fig. 8.—Seal of Mushesh-Enurta, in the British Museum.

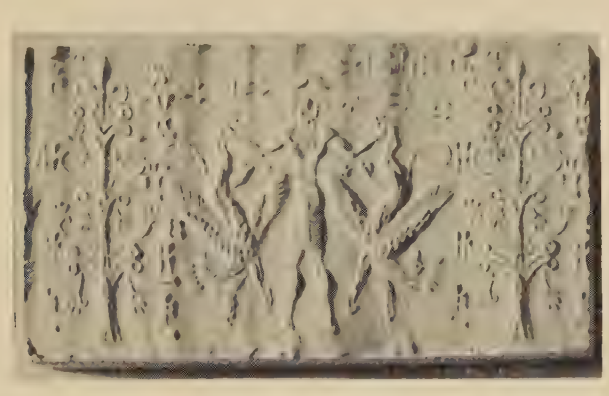

Fig. 9.—Assyrian Seal, in the Boston Museum of Fine Arts.

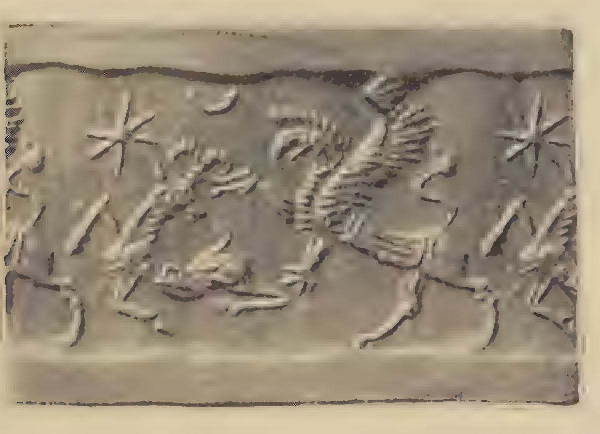

Fig. 10.—Assyrian Seal in the British Museum.

nothing unusual in this. Assyria created its first national style out of Mesopotamian and western elements, and the griffin belonged evidently to the latter. For us, however, the problem lies precisely in this derivation from the West.

The immediate source of non-Mesopotamian motives in Assyrian art is the kingdom of Mitanni, which from about 1600 to 1350 B.C. united the Assyrian territory as far east as Kirkuk with the North Syrian plain. It is difficult to define Mitannian art, since only a few seal designs can be recognised as such.[1] But it certainly used, besides its own inventions, motives derived from two sources: an older Syrian repertoire in which much of Mesopotamian origin survived; and the very hybrid applied arts of the Syrian harbour towns which combined Syrian with Egyptian and Aegean features. The griffin is as common in Mitannian (Figs. 21, 22) as in Assyrian art, and the question arises whether it was peculiar to the ephemereal kingdom, or reached it from one of the sources just named.

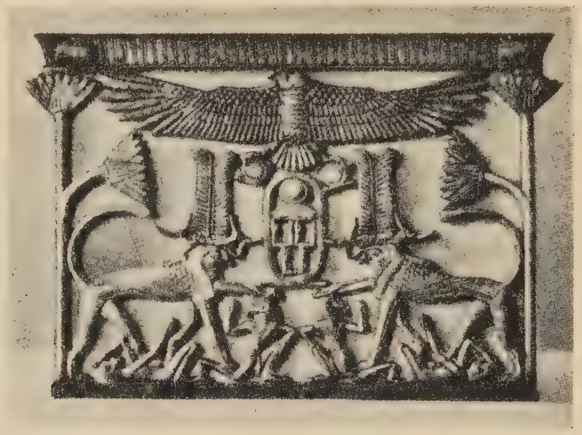

FIG. 11.—PECTORAL OF SESOSTRIS III IN CAIRO MUSEUM.

In Egypt a griffin is well known. It appears once amongst game on a slate palette of the late Predynastic Period,[2] but from the Fifth Dynasty onward it fulfils one specific function. Egyptian iconography knows the griffin exclusively as a destroyer of the king's enemies. In the instances

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[1] FRANKFORT, *Cylinder Seals* pp. 273–83.—The difficulty lies in the fact that the area occupied by the kingdom of Mitanni was both before and afterwards subjected to influences from surrounding regions. None of the large sculptures found in the region can be assigned with certainty to Mitanni, and it is instructive to compare what MOORTGAT, *Die bildende Kunst des alten Orients und die Bergvoelker* pp. 39–70 and CONTENAU, *La civilisation des Hittites et des Mitanniens* pp. 111–20 declare to be Mitannian works of art.

[2] QUIBELL AND GREEN, *Hierakonpolis* II Pl. XXVIII.

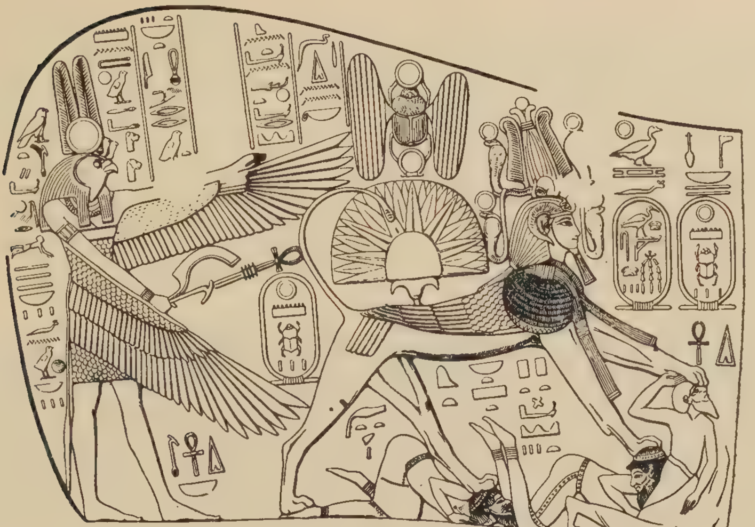

Fig. 12.—Inside of War-chariot of King Thutmosis IV, in Cairo.

dated to the Old Kingdom the heads are lost,[1] and though the leonine body possesses wings (and a feathered tail in addition to its own), it remains uncertain whether the head was human, as in the New Kingdom (Fig. 12) or bird-shaped, as in the Twelfth Dynasty (Fig. 11). It should be noted

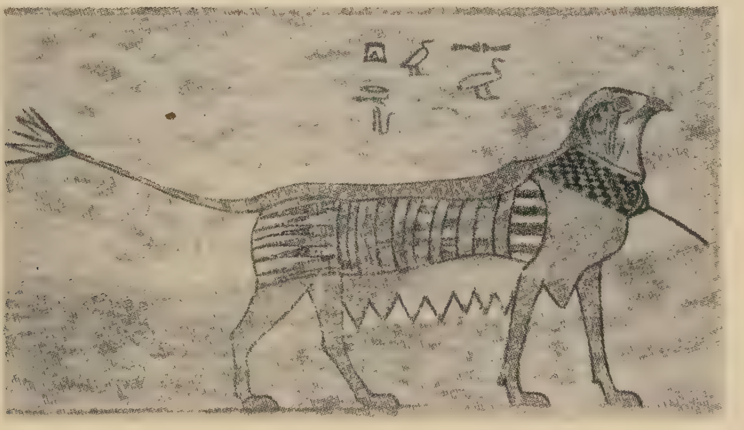

Fig. 13.—Painting in Tomb at Beni Hassan.
(After *Bulletin of the Metropolitan Museum*, New York.)

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[1] Borchardt, *Das Grabdenkmal des Königs Sahure* I 33; II Pl. 8 and p. 21. Idem, *Grabdenkmal des Königs Neuserre* p. 48.

that royal monuments like the illustrated pectoral of Sesostris III were copied in the tombs of Beni Hassan (Fig. 13). Thus only can we explain the coalescence of the lotus with the beast's tail in the painting. Consequently there is no evidence of popular belief in a griffin in Egypt, but only of an official symbol, with a definite function and definite characteristics. Its function may be the cause or the result of its association with the Theban wargod Menthu.[1] This connection at any rate accounts for the fact that the Egyptian griffin is clearly characterised as falcon-headed by the distinctive pattern of the peregrine appearing on its cheek. It differs therefore most markedly from the crested creature which forms the subject of this paper and which appears in Egypt at the beginning of the Eighteenth Dynasty, designated ' beloved of Menthu,' on a war-axe of King Aahmes (Fig. 14). The unusual addition of a legend accentuates the strangeness which this species possessed for the Egyptians themselves.

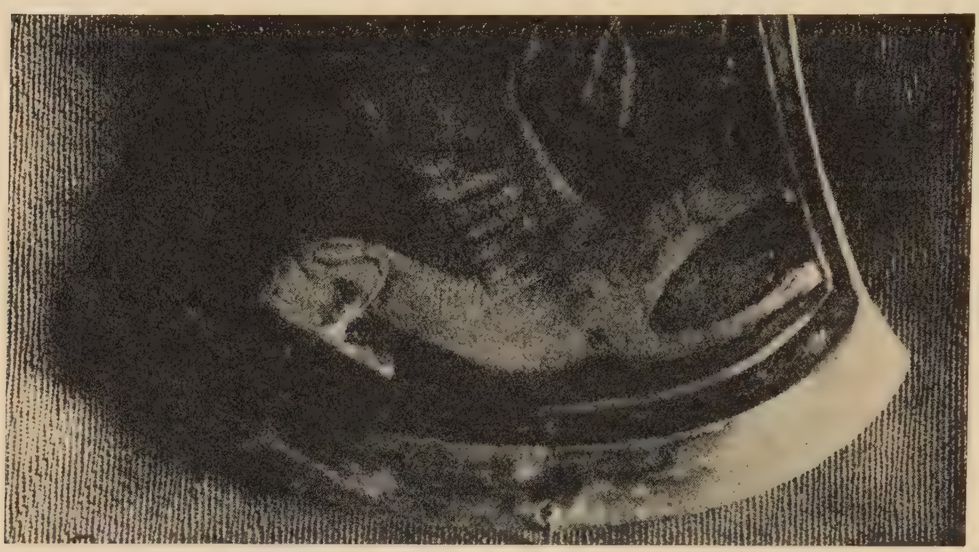

FIG. 14.—WAR-AXE OF KING AAHMES IN CAIRO MUSEUM.
(From Evans, *Palace of Minos*, by courtesy of Macmillan and Co.)

The foreign character of the griffin on the axe, at first widely recognised, has recently been denied, because the monster occurs on a scarab of the Hyksos period found at Tell Beit Mirsim in Palestine (Fig. 15).[2] The argument is not valid. The discovery merely shows that the creature was known outside Egypt before the beginning of the Eighteenth Dynasty, and for this there is ample evidence, as we shall see. The hieroglyphs on the scarab (ʿ*r*) have been considered to render the beast's Egyptian name [1] but they happen to be a pair that is frequently used on scarabs of the Hyksos period with apparently none but decorative intention.[2] The close similarity of detail—crest, curling plumes at neck, markings of the flight-feathers—between the Cretan griffins and that on Aahmes' axe speaks for a common origin. The true Egyptian griffin appears, however, with its own distinctive features as late as the reign of Aahmes' predecessor [3] and it is therefore most unlikely that the monster on the axe originated in Egypt. In Crete it appears for the first time in the miniature frescoes and the Zakro sealings, dated to MM III B, a period which did not end until well after the beginning of the Eighteenth Dynasty in Egypt.[4] Without attaching great importance to the mere chronology of first appearances, which may be invalidated at any time by new discoveries, we may inquire at least whether there are perhaps indications that both Egypt and Crete might have derived this griffin from a third region.

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[1] SETHE, *Urgeschichte und älteste Religion der Aegypter* 185 and p. 21.

[2] *Bulletin of the American Schools of Oriental Research* No. 47 p. 10.

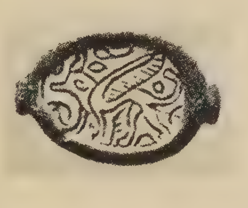

FIG. 15.—SCARAB FROM TELL BEIT MIRSIM, IN PALESTINE MUSEUM.

(After Rowe, *Catalogue*.)

The technique of the axe provides a first clue. Polychromy by means of gold and silver inlays in a background blackened by sulphur (niello) was not practised by the skilful goldsmiths of the Middle Kingdom. From Byblos, however, come several objects contemporary with the Twelfth Dynasty and decorated in this fashion.[5] One scimitar was found in a tomb containing also presents sent by Amenemhet IV to the local ruler; but the hieroglyphs inlaid on that ruler's scimitar prove by irregularities that the weapon was of non-Egyptian, and thus presumably local manufacture.[6]

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[1] PALESTINE EXPLORATION FUND, *Quarterly Statement* 1933 97.

[2] ALAN ROWE, *A Catalogue of Scarabs, Scaraboids, Seals and Amulets in the Palestine Archaeological Museum* Nos. 215–31 244 etc. PETRIE, *Buttons and Design Scarabs* 341–4, 463–70 etc. Petrie's reading Erdara seems to me as gratuitous as the Ra-ne-Ra which he rejects (p. 17).

[3] EVANS, *Palace of Minos* I 710 fig. 533c.

[4] IDEM, *id.* IV 874.

[5] MONTET, *Byblos et l'Egypte* Pls. XCIX, C (scimitars); XCVIII (Uraei), CII no. 655 (knife); CV nos. 701 703 (terminals of handles).

[6] MONTET, *Byblos et l'Egypte* pp. 174 ff.

The technique applied to Aahmes' axe and to the daggers from the shaft-graves at Mycene was thus practised some centuries earlier in Syria.[1] Its roughly simultaneous introduction in Greece and Egypt establishes a triangle of connections borne out by the designs on those weapons. The Egyptian features of one Mycenaean dagger are well known;[2] Aahmes' axe-design is Egyptian but for the griffin, but the dagger of his mother Aahotep, found with the axe, shows the distinctively Cretan indications of landscape along the upper edge of the scene as well as 'Phoenician' palmettes on the reverse.[3] This close interweaving of influences emanating from various centres in the Near East is highly characteristic for the period immediately preceding the production of those weapons. The great movements of peoples which brought the Hittites to Babylon and to Anatolia, the Hyksos to Egypt and the Kassites, Mitanni and possibly Hurrians to the scene of their short pre-eminence, destroyed established traditions sufficiently to create the conditions under which contact may become influential. But the achievements of periods of disturbance can only be measured by their consequences. Now we find in the sixteenth and fifteenth centuries B.C. throughout Northern Syria and Northern Iraq, at Ashur,[4] Tell Billa,[5] Nuzi,[6] Nineveh, Tell Brak,[7] Tell Tainat [8] and Atchana,[9] the so-called Hurrian pottery, which in shape and in much of its design is Asiatic, but which uses Aegean running spirals and the Cretan white on black technique. At Nuzi, near Kirkuk, in north-eastern Iraq, we find a fresco combining a curious type of palmette with Hathor-heads, Aegean bull's heads, the Babylonian guilloche, and the 'notched' design of the Cretan griffin's wings.[10] Ivories from the palace at Atchana, near Antioch present a similar combination (Fig. 16). One shows a typically Mycenaean scroll design;[1] another our griffin hunting; a third an emblem which, whatever its exact meaning,[2] was peculiar to the Anatolian Hittites; a fourth, a squatting cat, recalls a necklace of Aahotep.[3]

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[1] SIR ARTHUR EVANS claims (*Palace of Minos* III 112) an engraved dagger from Lasithi (MM II) as the ancestor of the Mycenaean daggers. This applies, however, only to the notion of ornamenting the blade with a hunting scene. No evidence is given that the engraving was ever inlaid with another metal, and even then there would be no question of niello.

[2] In addition to a general similarity of subject (cats hunting wild fowl in papyrus thicket) there is a curiously 'unrealistic' feature in the capturing by one cat of two ducks with front-paws and hindlegs at the time, which is quite in keeping with the ideoplastic art of Egypt and, in fact, occurs often in the tomb paintings *e.g.* the Theban fragment in the British Museum.

[3] STEINDORFF, *Die Kunst der Aegypter* p. 303 b.

[4] ANDRAE, *Coloured Ceramics from Ashur* Pl. 5.

[5] *The Museum Journal* XXIII Pls. LX LXI.

[6] R. F. S. STARR, *Nuzi* II Pls. 78, 79.

[7] *Illustrated London News* 15 October 1938 pp. 698 699.

[8] Sherds at the Oriental Institute, University of Chicago.

[9] *Illustrated London News* 9 October 1937 pp. 604, 605; 17 September 1938 p. 504. The term 'Atchana ware' and the repeated reference to a 'hitherto unknown painted ware' are, of course, highly inappropriate. The problem presented by the incommensurate philological and archaeological material is formulated by Sidney Smith in *Antiquity* XII (1938), 425 ff.

[10] STARR, *Nuzi* II Pls. 128 129.

The extensive cultural exchange exemplified by the spread of artistic motives was prepared by connections established previous to the migrations.[4] The First Babylonian Dynasty, at least since Hammurabi's reign, influenced Syria predominantly, but the discoveries at Byblos, Ras Shamra, and even Qatna, inland, show that the twelfth Egyptian Dynasty was more interested in the Levant than has usually been assumed. There are no signs of conflict, either between the natives and the foreigners, or among the latter. It may be that mere lack of information is responsible for the apparent contrast between the incessant Syrian wars after the collapse of the Hyksos, and the peaceful era when the daughter of Pharaoh Amenemhet II sent gifts to the temple of the Babylonian Moon-god Ningal at Qatna;[5]

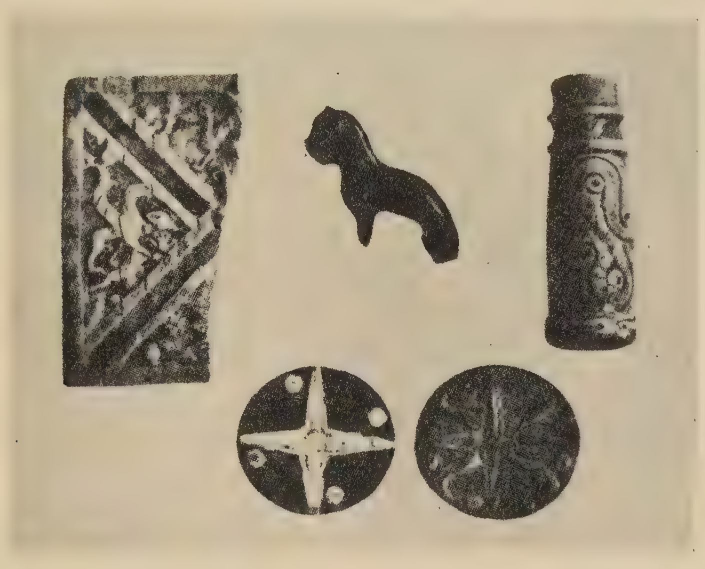

FIG. 16.—IVORIES FROM THE PALACE AT ATCHANA.

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[1] KARO, *Die Schachtgraeber von Mykenai* pp. 270 ff.

[2] This 'signe royal' has been recently discussed by KURT BITTEL and HANS GUSTAV GÜTERBOCK, *Bogazköy* (Abhandlungen der Preussischen Akademie der Wissenschaften Jahrgang 1935 Phil. Hist. Kl. 1), pp. 41 f.

[3] GEORG MÖLLER, *Die Metallkunst der alten Aegypter* Pl. 6.

[4] This subject has been studied by PIERRE DEMARGNE in *Revue Archéologique* 1936 80 ff.; *Annales de l'Ecole des Hautes Etudes de Gand* Tome II (1938) 31–66, and by RÉNÉ DUSSAUD, in *Iraq* VI (1939), 53–66.

[5] *Syria* IX (1928), 16.

when statuettes of Egyptian officials could be erected in Ras Shamra-Ugarit, though it adopted cuneiform writing; and the ruler of that coastal town ask Hammurabi for an introduction to the king of Mari, whose palace he was anxious to visit. Archæologically the change brought about by the migrations of the eighteenth century B.C. appears in the first place in this: while hitherto *imported* objects had borne witness to intercourse with foreign countries, we find that subsequently, at Nuzi, at Atchana, and in the Aegean, *local* products contain elements of divergent origin. In the light of these recent discoveries the long-known distribution of monuments of the Hyksos-ruler Khian over Cnossos, Babylonia, and Egypt gains a significance which scholars have hitherto been chary to admit.[1] There is no longer any difficulty in assuming that he exercised some sort of authority over all these regions, since such a rule, however shortlived, would be no more than the political correlate of the cultural cross-currents which we can trace.

As regards our griffin, it is certain that the whole of this supposed Hyksos dominion became its habitat. Its appearance in Egypt and Mesopotamia we have already discussed. In Crete it appears at the same time, and with unmistakable Syrian associations. These consist, in the first place, of a female sphinx with which it is figured in the miniature frescoes [2] as well as on the Zakro sealings.[3] Now, the female sphinx is a Syrian transformation of the male Egyptian symbol of divine royalty. In the second place, it is highly significant that the first appearance of the winged griffin and sphinx in Crete should be on woven stuffs depicted in the miniature frescoes. For it is most unlikely that such fabrics could be made in Crete at the time. Representational art in any shape or form other than glyptic was unknown in the island until the very period with which we are dealing [4] and it is obviously impossible to assume that the weavers would have been the first to introduce it. The innovation of representational wall-paintings is, in fact, a peculiarly Cretan consequence of the closer cultural contacts established during the Hyksos period. Egypt was the source of inspiration. This follows not only from certain subjects such as the hunting cats and papyrus on Aegean monuments of the sixteenth century and earlier, but even more convincingly from the use of various Nilotic conventions which, somewhat oddly, appear in the "impressionistic" art of Crete.[5] The recent discoveries of wall-paintings in a palace of the Hammurabi period at Mari on the middle Euphrates confirms that it was from Egypt and not from Asia that the suggestion of representational art was derived. For at Mari the uncovered flesh of both men and women is painted red,[1] while the Minoans, as the Egyptians, distinguished conventionally men and women by red and white colouring.

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[1] So Hall, *Ancient History of the Near East* p. 218; but Breasted, *History of Egypt* p. 218 thinks of an empire while Ed. Meyer, *Gesch. d. Alt.* II 2, 43 not only conjures up Attila and Dzenghis Khan, but also (p. 54) postulates a marriage between Aahotep and king of Crete and assigns to their combined forces the overthrow of the Hyksos.

[2] Evans, *Palace of Minos* I 549 III 41.

[3] *Id.* I 712 fig. 536.

[4] The 'saffron-gatherer' is dated by Sir Arthur Evans to MM II, but this early date is decidedly not proved, and seems to me improbable. See Snijder *Kretische Kunst* pp. 27 ff.

[5] For further details see *Francis G. Newton Memorial Volume, The Mural Painting of El Amarna* pp. 19 ff. 24.

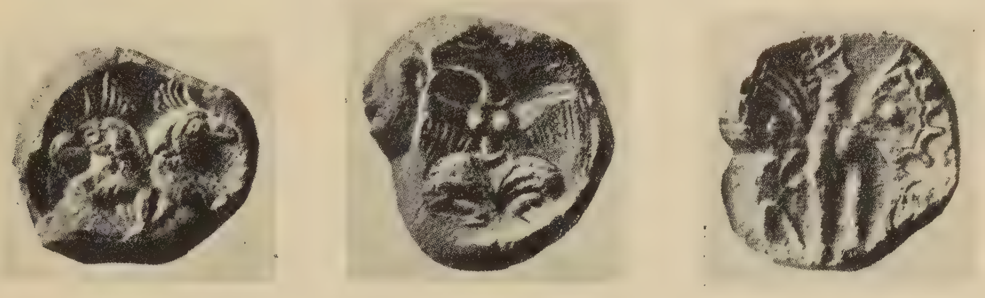

Fig. 17.—Seals from Zakro.

It should now be clear that we are confronted with copies of imported textiles when we find amongst the earliest representational wall-paintings in Crete stuffs with living creatures as ornaments; of one of these, the female sphinx, the Syrian origin is certain, and if we may trust the reproduction of this fragment, it would appear here without the characteristic Cretan crown which cuts straight across the profile and not, as on this fresco, with a curve.[2] Woven stuffs have, at all times, been a staple export of Western Asia. To this extent the earliest occurrence of the crested griffin in Crete as a textile pattern represents a further Syrian association.

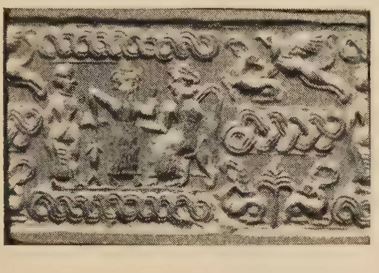

Fig. 18.—Syrian Seal of the First Group, in the Ashmolean Museum.

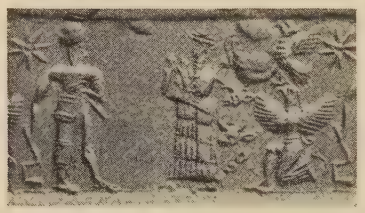

Fig. 19.—Syrian Seal of the First Group, in the Louvre.

A third association is with the griffin-demon which appears, together with the griffin and the female sphinx, on the Zakro seals (Fig. 17). Now, this same triad occurs on Syrian seals which antedate all the occurrences of our griffin mentioned so far. It is true that their date is not established stratigraphically, but they are so closely connected with the glyptic of the First Babylonian Dynasty before the disintegration of its style that they must antedate the Second Intermediate Period (Figs. 18, 19). These seals form the " First Syrian Group." [1] It is possible that we have one of them in a gold-capped lapis-lazuli cylinder actually found at Knossos, but unfortunately only known in a drawing (Fig. 20), and this would then be one of the vehicles which made the griffin as well as the griffin-demon and the female sphinx known to the Minoans. It is interesting to note that the

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[1] v. *Syria* 1937 Pl. XXXIX.

[2] Evans, *Palace of Minos* II 778 Fig. 506.

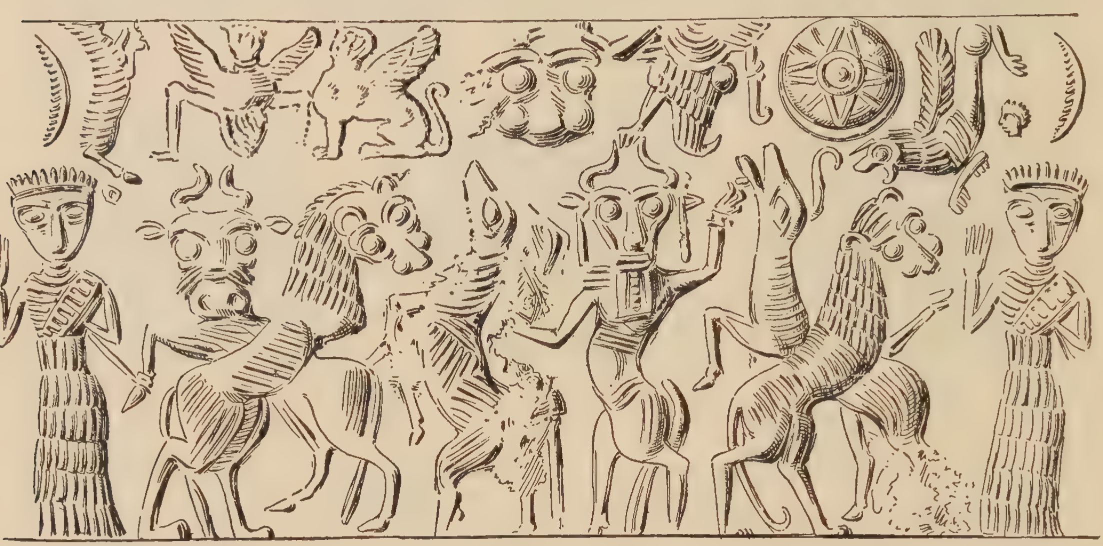

Fig. 20.—Syrian Seal of the First Group (?) from Knossos.
(From Evans, *Palace of Minos*, by courtesy of Macmillan and Co.)

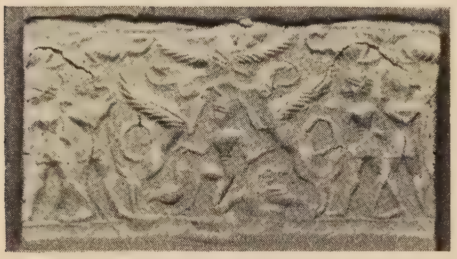

Fig. 21.—Mitannian Seal from Tell Chagar Bazar.

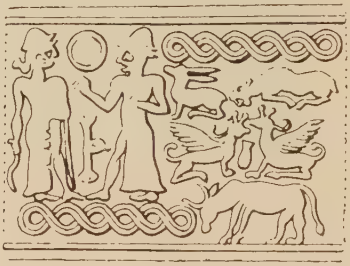

Fig. 22.—Sealing from Kirkuk, in Berlin Museum.

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[1] Frankfort, *Cylinder Seals* pp. 252–8.

griffin-demon on these Syrian seals is always shown in a curious kneeling attitude and dressed in a skirt (Fig. 19) which the Zakro carver translated into Cretan forms. From this First Syrian Group, Mitannian glyptic derived much, and amongst other motives, the griffin which is found on the few fine seals (Fig. 21) as well as on the glazed seals of the popular style which are best known from the Kirkuk tablets, but which spread all through the Near East, from Persia to Southern Palestine (Fig. 22).

The griffin not only appears in Syria earlier than elsewhere, but it also survives there after the fall of Knossos, with all its distinctive features intact. The reliefs from Carchemish, Sendschirli, Sakjigeuzi, and Tell Halaf may have been made under the influence of Assyria,[1] but that suspicion does not rest upon the metal and ivory work from Ras Shamra,[2] Byblos,[3] Tyre [4] and Megiddo [5] (Fig. 23). Montet has shown that the reappearance of the crested griffin on Egyptian monuments of the Nineteenth and Twentieth Dynasties, several centuries after the isolated inlay on Aahmes' dagger, seems to be confined to pictures of objects imported from Syria,[6] and thus belonging to the same class as the griffin-headed rhyta

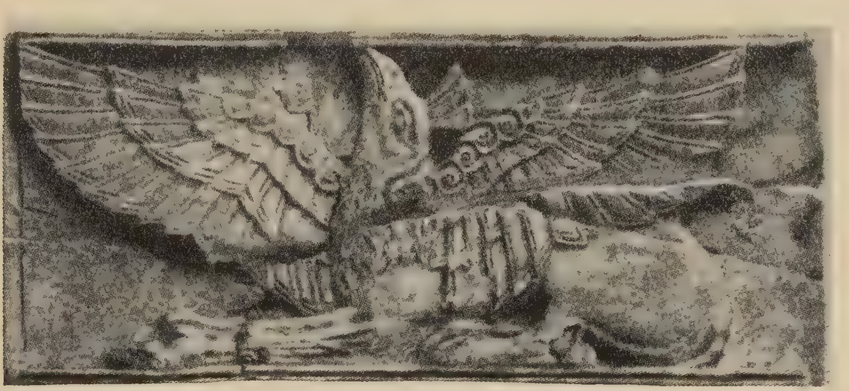

FIG. 23.—IVORY FROM MEGIDDO.

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[1] This circumstance is not taken into account by MOORTGAT in his treatment of our griffin in *Die Bildende Kunst des alten Orients und die Bergvoelker* pp. 39–47.

[2] S. F. A. SCHAEFFER, *The Cuneiform Texts of Ras Shamra-Ugarit* Pl. XVII 2.

[3] MONTET, *Byblos et l'Egypte* Pl. CXLII No. 878.

[4] IDEM, *Les reliques de l'art Syrien dans l'Égypte du Nouvel Empire* 131 fig. 172.

[5] In addition to these works there are griffins on a large number of Syrian seals of the Second and Third Groups, and a number, probably of Cypriote origin, which cannot yet be properly distinguished. Some examples: FRANKFORT, *Cylinder Seals* Pl. XLV *g*, *i*.

[6] MONTET, *Reliques de l'art Syrien* XXXX 111–14 172. He rightly stressess in this case, as in that of the bitch- or sow-like sphinx which is occasionally depicted in Egypt from the time of Amenhotep III onward, the importance of the round medallion worn round the neck and which is shown already on the bowl from Ras Shamra referred to in note 2 above;

or vase covers brought by foreigners and depicted in the tombs of Rekhmire and Useramon.[1]

The interpretation of the griffin is but little furthered by the recognition of its probable homeland, since so far no Syrian texts seem to refer to the creature. The representations suggest that we should now separate the griffin from the winged and griffin-headed demon with human body and limbs whom we have treated hitherto as a variant of our main theme. It is true that the two appear together in Syria as well as in Crete and in Assyria, but there is some difference in the context in which they are depicted. Both may guard the sacred tree, but furthermore we find the griffin in hunting scenes, mostly killing game (Figs. 10, 18) but occasionally being attacked by a bowman or, held captive as in Fig. 9, or restrained by the griffin-demon from getting its prey (Fig. 24). The griffin-demon appears throughout as beneficial to man (Figs. 7, 8). What is the relation between the two? It is possible that the griffin represents some terrifying power, against which the griffin-demon affords protection, or with which, in the shape of the griffin-demon, humanity can be reconciled. Protective genii are common in Western Asia, and the griffin's head may indicate the specific help and protection which man expected from this particular genius. The griffin-demon occurs amongst the prophylactic figures, described in texts and found actually at Ur, which were intended to safeguard the Assyrian householder[2] against evil spirits. Perhaps the consciousness of a great cosmic force might find double pictorial expression, namely in its purely terrifying aspect as the griffin, in an aspect more accessible to man's prayers as the griffin-demon. To complete our

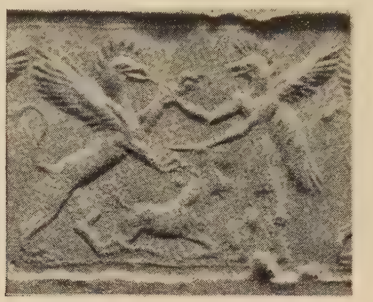

FIG. 24.—ASSYRIAN CYLINDER IN THE PIERPONT MORGAN LIBRARY.

Asiatic examples occur at widely scattered places and times, *e.g.* *Syria* XVIII (1937), Pl. XVIII; GHIRSHMAN *Fouilles de Tepe Giyan*, Pl. 15, tomb 38; *Iraq* IV Pl. XIIIA, while in Egypt this simplest type of pendant is practically unknown at all periods.

[1] EVANS, *Palace of Minos* II 534–5.

[2] *Journal of the Royal Asiatic Society* 1926 689 ff.

hypothesis we might add that we should like to regard the griffin as an ' Angel of Death.'

Sir Arthur Evans has interpreted the Ring of Nestor as a picture of the nether world (Fig. 25). There the griffin is enthroned while two griffin-demons appear in front, as adorants or ministrants, and are also seen in the other compartments of the design. On an Anatolian cylinder they attend a goddess crowned with a star.[1] We must reckon with fairly different interpretations of these figures in the various regions to which they spread, and we can do no more than hint at a possible common element in these beliefs. We may note, then, that the griffin as a messenger of the nether world would well agree with the common view that the dead, and all connected with the land of the dead, possessed bird-like qualities in voice, movements, or appearance. The Egyptian renderings of the Ba are well known, of course,

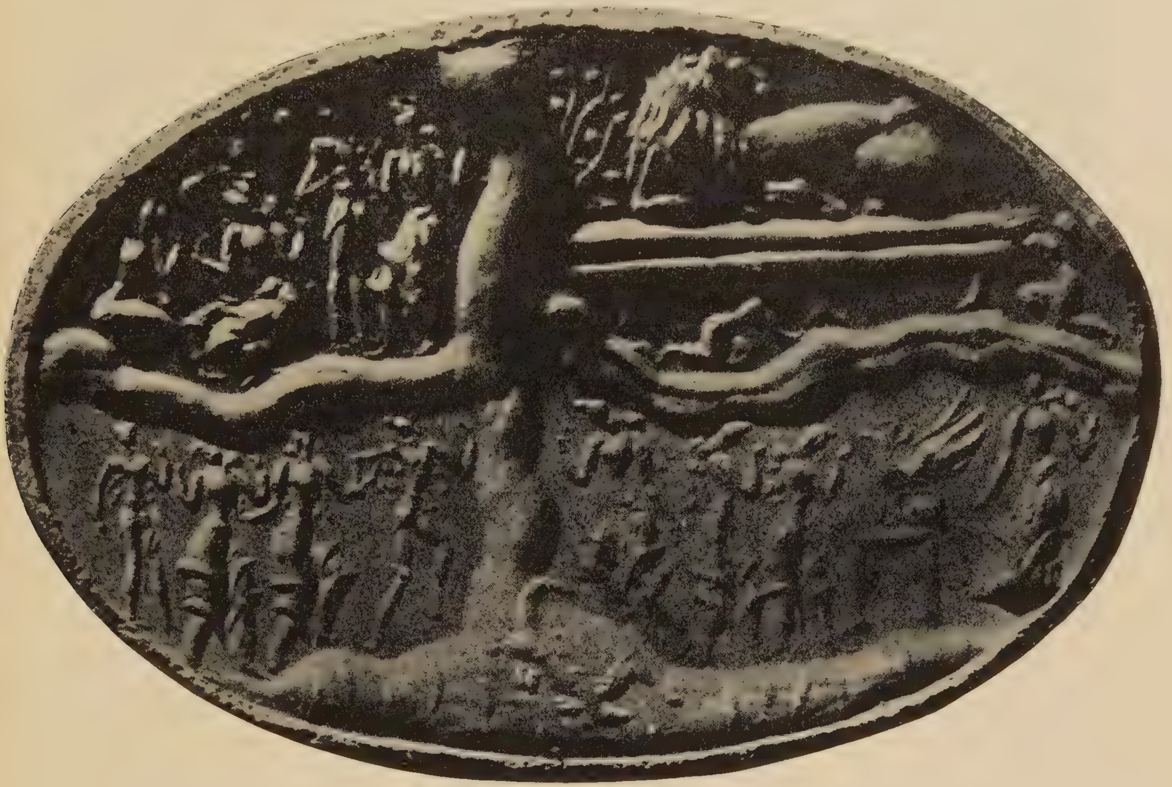

FIG. 25.—THE RING OF NESTOR.
(From Evans, *Palace of Minos*, by courtesy of Macmillan and Co.)

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[1] DELAPORTE, *Catalogue des cylindres orientaux . . . musée du Louvre*, 197, no. A-927.

but a text found not so long ago describes the behaviour and appearance of the souls when they come to the earth with unusual explicitness.[1] Similar views, more or less explicit in detail, were widely held in the ancient world. Enkidu, the friend of Gilgamesh, had an ominous dream before he died, in which a dark-faced figure, with a face like that of a great bird and claws like that of an eagle, changed Enkidu's appearance so that his arms became feathered, after which he guided him ' Unto the dwelling from which he who entereth cometh forth never.'[2] The seal of Fig. 5 finds so also its explanation. Though there are no Syrian texts attesting similar beliefs, and none from Crete that we may read, we may provisionally range the crested Griffin with the Soul-birds, Harpies, and Sirens in which later dwellers in the Aegean area objectified certain aspects of the terror inspired by death.

H. FRANKFORT.

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[1] FRANKFORT, *The Cenotaph of Seti I at Abydos* p. 73 text D.

[2] R. CAMPBELL THOMPSON, *The Epic of Gilgamish* pp. 38–9; more recently a fuller rendering has been given by A. SCHOTT *Das Gilgamesh Epos* pp. 48–9.

NOTES ON SOME DECORATED SKELETONS FROM THE MESOLITHIC OF PALESTINE

During the joint excavations carried on from 1929 to 1934 by the British School of Archaeology in Jerusalem and the American School of Prehistoric Research in the caves of the Wady el-Mughara in Mount Carmel, many burials were found in the Natufian (Mesolithic) deposit of the big cave known as the Mugharet el-Wad.[1] In addition to scattered human fragments, there were forty-four skeletons in varying stages of preservation, of which thirteen were found inside the cave, and the rest in the terrace-deposit in front of the cave-mouth. Of these burials thirty-four belong to the Lower Natufian stage, three to the Upper Natufian, and the rest, although undoubtedly Natufian, cannot, owing to the condition of the deposit, be assigned with certainty to one stage or the other.

Five bodies, all belonging to the Lower Natufian, were adorned in various ways with dentalium shells and bone pendants, and it is the object of this paper to describe these particular burials in more detail than has been attempted so far.

The best-preserved example, which is almost certainly the skeleton of a man (Homo 25),[2] lay on its left side, with the head pointing S.E. The legs were so closely flexed that the distal ends of the femora were on a level with the lower jaw, and the left patella was pressed against the upper incisors. In order to keep such a position it would have been necessary to bind the corpse, or to press it into a very small grave soon after death. The right arm was bent up, and the hand lay below the shaft of the right femur. The position of the left arm is not known, as the skeleton was removed in one piece on a block of plaster, and has been placed on exhibition in the Palestine Museum without further disturbance. A piece of the tibia of another skeleton was firmly cemented to the lower end of the right tibia of H. 25, and as it could not be removed without injuring the bones of the feet, it was left in place, and is clearly visible in photographs of the burial.

Immediately underneath the skeleton lay the fragmentary remains of two or more individuals whose exact position could not be ascertained; these are now embedded in the plaster block. An isolated skull, resting on its vertex, was in contact with the frontal of H. 25, and the two heads lay on the pelvis of another very fragmentary skeleton (H. 26) which was buried with the head pointing N.E. The isolated skull may possibly belong to the body whose tibia adhered to the feet of H. 25; that is to say, another body, afterwards disturbed, must originally have lain immediately above H. 25, in the same axis. All these more fragmentary remains appear to belong to a group burial, of which H. 25 was presumably the principal figure.

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[1] D. A. E. Garrod and D. M. A. Bate, *The Stone Age of Mount Carmel.* Oxford 1937.

[2] The skeletons are numbered in the order of their discovery.

The skull of H. 25 was encircled by a band made up of seven rows of dentalium shells, which were firmly cemented to the bone by a calcareous concretion. (Plate 10*a*.) This band was visible only on the right side of the head, but is probably equally well preserved on the left side. The shells were perfectly in place over the temporal, but were disarranged over the occipital and frontal, some shells from the lowest row having even slipped down below the nasal aperture. It is impossible to say whether the shells were originally strung on cords to form a simple circlet, or were fastened to the edge of some kind of cap. No other ornaments were found with this skeleton, or on those buried with it.

Homo 23, also a male skeleton, lay quite close to H. 25, but was much less well preserved. The body lay on its face, with the head pointing N.W., the legs being tightly flexed, and drawn up to the left side of the skull. The remains of a second, very fragmentary skeleton were found mixed up with H. 23, and it appeared that the bodies had been buried side by side, in the same position, and possibly in each other's arms. The sex of the second skeleton could not be determined. Underneath the adult bodies were the fragmentary remains of a child. All the skeletons were packed into place with large fragments of limestone, which had damaged the bones very seriously.

As the burial lay in the ground, groups of dentalium shells could be seen sticking to the occiput of H. 23, and scattered shells lay all round the skull and inside the thorax. The lower jaw and upper part of the thorax were also filled with bone pendants, obviously the remains of a necklace. A band or garter made up of eight rows of shells encircled the shaft of the right femur.

The shells which were sticking to the occiput did not form any recognisable pattern, but when the skull was lifted it was found that the forehead was covered with dentalium shells which had become cemented to the bone, as in the case of H. 25. (Plate 10*b*.) The shells were arranged in two fan-shaped motifs, each spreading forward from the parietal to a line about halfway along the supra-orbital margin. The lower edge of the fan on the right side of the skull lay just above the margin, but that on the left side had slipped down over the eye-socket. Each fan was made up of three groups of dentalium shells, carefully matched so as to be approximately equal in length, the number of rows increasing from back to front. The fans must have been fastened to a cap of some kind, made perhaps of skin or netted hair-string.

The bone pendants in the jaw and thorax were in some cases found lying together in pairs, as shewn in the reconstructed necklace. (Plate 11*a*.) The placing of dentalium shells between the pendants is a guess, but it was found that the pairs did not hang well without something of the kind to separate them, and shells were actually found scattered among the beads. Twenty-five pairs were found intact, together with a number of broken pendants; the original necklace was therefore somewhat longer than the reconstruction. The pairs are graduated in size, and the largest, which must have hung in front, have the shanks decorated with notches on the side which was meant to show.

Another elaborately decorated body was found in a group of seven skeletons (H. Group 57). The bodies, which were very fragmentary, were placed on their sides with knees drawn up, and the four which lay on top were disposed in a circle round a broken limestone mortar. The decorated body, which was one of these four, lay on its right side, at a slightly lower level, and partly underneath the other three. The head was covered by blocks of limestone, which had crushed the skull very badly, but a mass of bone pendants lying below the mandible was uninjured, and when the skull was lifted fairly extensive remains of a shell cap were found on the right side. Part of this was stuck to the bone, and came away with it, while the rest remained in place on the ground. (Plate 11*b* and Plate 12*a*.) This cap was again quite different from either of those already described. A narrow fillet, made up of three rows of shells, encircled the head, and from this was hung a fringe, four shells deep, which must nearly have reached the shoulders. Only two rows of the fringe remained on the skull when it was removed, but the remaining two lay on the ground, practically undisturbed. They can be seen in the photograph, Plate 12*a*, and it is also possible to see the imprint of the shells which came away with the skull. Mixed with the shells were a few pendants cut from the distal end of the tibio-tarsus of a bird. These are not in any way artificially shaped or modified, and they must have been strung through a tiny foramen in the articulation which opens into the shaft of the bone.

The necklace is of the same type as that found with H. 25, but in this case some of the pairs are carved in a single piece of bone. Twenty-three complete pairs were found at the time of excavation, and eight more were recovered later from the inside of the skull when it was cleaned in London.

Apart from these two necklaces only a few scattered pendants of this kind (which I have named the ‘ twin ’ type) were found at the Mugharet el-Wad. A much more common form in this and other Natufian sites is more or less oval or pear-shaped, rather flat, with one face very slightly convex. The only examples which I have been able to find for comparison with the ‘ twin ’ pendant are rather widely separated from it in time and place, and in describing them I do not claim any necessary connection with the Natufian specimens. Klebs[1] figures an amber pendant of Early Neolithic age from Schwarzort in the East Baltic which resembles the ‘ twins ’ carved in one piece, and in a late Aurignacian station on the Linsenberg, near Mainz, Neeb and Schmidtgen[2] found fragmentary pendants of resinous wood which have the same form as the single ‘ twins ’, but are very much smaller than any of the Palestinian specimens. Quite recently Absolon[3] has published photographs of a remarkable necklace made up of ‘ twin ’ pendants carved in one piece from mammoth ivory, and found in the Upper Aurignacian (or Willendorfian) of Vistonice, near Brünn. These differ from all those so far described in being threaded through a tiny lug on the back of the piece instead of through a hole bored in the shank, a point which seems to me to outweigh any accidental resemblance of form. By comparison with a hyperstylised ‘ Venus ’ from the same site Absolon is able to shew that it is reasonably certain that the form of the Vistonice pendants is derived from female breasts, but we have no definite clue to the meaning of the Natufian ‘ twins ’.

The fourth decorated skeleton (H. 41) lay, not in a group, but alongside one other very fragmentary body. H. 41 was itself very badly preserved, but the skull was more or less complete, and had sticking to it little groups of dentalium shells, and bone pendants cut from the tibio-tarsus of a bird identical with those found on the head-dress of H. 57. (Plate 12*b*.) It is not possible to reconstruct the form of this head-dress from these scanty remains, but it is worth noting that it is the only case in which shells were found on the crown of the head. Rather better preserved was a strip on the shaft of the right humerus made up of eighteen dentalium shells spreading fan-wise, which may be a remnant of a cloak or some other garment. There were also groups of shells on the shaft of the right femur, but it was not possible to interpret these. Owing to the fragmentary state of the bones it was not possible to determine the sex either for H. 41 or H. 57.

The last decorated body was found in a group of five fragmentary skeletons (H. Group 28) packed together in some confusion. On the edge of the group was the incomplete skeleton of a young child, with badly flattened skull. (Plate 12*c*.) To one side of the head and partly overlying the right parietal lay a group of thirty-two pendants spaced in such a way as to suggest that they had originally been fastened to a cap or net. These pendants, of which isolated examples had been found earlier in the dig, are cut from the distal ends of gazelle phalanges, and are not unlike the tibio-tarsus pendants already described. The articulation is usually rubbed down slightly and in some cases decorated with notches, and for the purpose of threading, a hole, corresponding in position with the natural foramen in the bird bone pendant, is bored from the ventral face into the hollow of the shaft.

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[1] R. Klebs, *Der Bernsteinschmuck der Steinzeit.* Königsberg 1882.

[2] E. Neeb and O. Schmidtgen, *Eine altsteinzeitliche Freilandraststelle auf dem Linsenberg bei Mainz.* Mainzer Zeitschrift, xvii–xix, pp. 108–12.

[3] K. Absolon, ‘ “ Modernist ” Moravian Art 30,000 Years Ago.’ *Illustrated London News*, March 25, 1939.

It is possible to make a few general observations on the material from the Mugharet el-Wad, though it needs to be supplemented by further discoveries. It is worth noting that in the only two cases where the sex could be determined the decorated skeletons were those of males. We know therefore that men wore these shell caps and necklaces, though we are still not sure whether women were denied this privilege. If we take into consideration all the burials from the Lower Natufian horizon, the number of decorated skeletons is very small, which suggests that they belong to individuals having a special position in the community. This is borne out by the fact that in four cases out of five the decorated body was one of a group, and that the accompanying skeletons were unadorned. Although there was nothing to suggest that the bodies were not all buried at the same time, it would be going too far to assume that the death of an important man necessarily involved the sacrifice of other lives.[1]

The variety of design displayed in the head-dresses is interesting, and shows a great appreciation of the possibilities of a simple form like the dentalium shell. We know from carvings in the round found at the Mugharet el-Wad and other Natufian sites that these people had some ability as craftsmen, but the burials just described afford the only examples we have at present of this particular kind of shell-work.

Our knowledge of the Natufian is derived from a very limited number of excavations, and the caves of Palestine must still hold many secrets of their culture. When digging once more becomes possible in that region, a systematic search for Natufian sites is one of the most enthralling possibilities which awaits the archaeologist. D. A. E. Garrod.

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[1] In addition to those described, only one other group burial was found, that is only one which contained no decorated body. This was in the Lower Natufian deposit inside the cave (H. Group 1–10).

THE CAMPAIGNS IN AMPHILOCHIA DURING THE ARCHIDAMIAN WAR

In an article entitled ‘A contribution to the Topography of north-western Greece’ [1] Professor J. L. Myres and Canon C. M. Church published the papers of General Sir R. Church and the sketch-maps of his aide-de-camp, Colonel Jochmus, which related to the 1828–9 campaigns in the Greco-Turkish War. In elucidating these campaigns they were able to define the salient features of an area, in which no topographer had travelled since Colonel Leake in 1809; and they laid the basis for a further study of Demosthenes’ campaigns in Amphilochia in 426 B.C. During my travels in Amphilochia I was much indebted to the work of Professor Myres and Canon Church; it is therefore an honour and a pleasure to publish my results in a volume dedicated to Professor Myres.

In order to understand the campaigns in this area during the Archidamian War, it is essential to consider the nature of the country between Ambracia and Acarnania and to define the territory of Amphilochikon Argos.

The east coast of the Gulf of Arta contains a small alluvial plain, some four kilometres wide and eleven kilometres long, which has been formed by two streams flowing from the mountains inland. The northern of these streams draws its waters from the valleys of Mt. Makrinóros to the north and from the hill-country to the east; on its banks it carries the largest village in the area, Loutró, which lies some two kilometres inland from the plain. The southern stream, the Botoko, draws its waters from the long rift which runs SSE toward Aetolia and from the hill-country to the east; on its right bank lie the extensive ruins of Amphilochikon Argos, commanding the plain from its position on the lowest slopes of the sandstone hills. The plain is enclosed to the south by a low limestone range which culminates in the spur called Paleo-avlí (93 metres high), to the east by sandstone hills rising to 300 metres, and to the north by the steep spurs of Mt. Makrinóros; the plain is level, being broken only on the west by the limestone outcrop Agrilovúni (87 metres high), which is washed at its northern end by the stream of Loutró where it enters the Gulf at Arápis. On the coast there are two anchorages, one at the mouth of the stream by Arápis and the other beneath Paleo-avlí.

The plain of Loutró is separated from the plain of Arta, which forms the

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[1] *Geographical Journal* XXXII (1908).

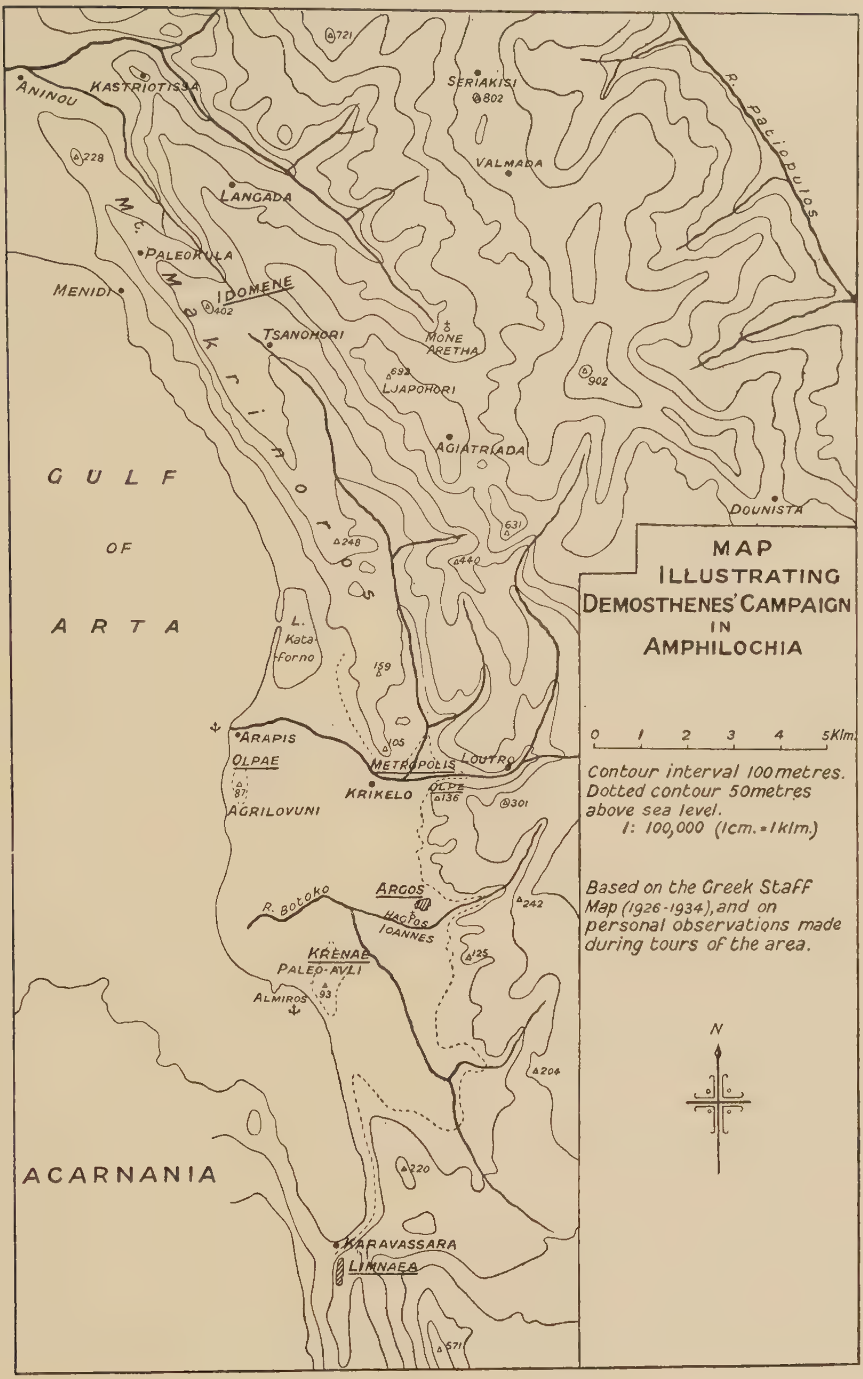
MAP
ILLUSTRATING
DEMOSTHENES' CAMPAIGN
IN
AMPHILOCHIA
0 1 2 3 4 5Klm.
Contour interval 100 metres.
Dotted contour 50 metres
above sea level.
1: 100,000 (1cm.=1klm.)
Based on the Greek Staff
Map (1926-1934), and on
personal observations made
during tours of the area.
N
ANINOU
KASTRIOTISSA
721
SERIAKISI
802
VALMADA
R. Patiopulos
228
LANGADA
Mt. Makrinoros
PALEOKULA
MENIDI
IDOMENE
402
TSANOHORI
MONE ARETHA
692
LJAPOHORI
902
AGIATRIADA
GULF OF ARTA
DOUNISTA
631
248
440
L. Kataforno
159
ARAPIS
OLPAE
105
METROPOLIS
LOUTRO
87
AGRILOVUNI
KRIKELO
OLPE
136
301
R. Botoko
ARGOS
HAGIOS IOANNES
242
KRENAE
PALEO-AVLI
125
93
ALMIROS
204
ACARNANIA
220
KARAVASSARA
LIMNAEA
571

FIG. 1.

northern shore of the Gulf, by a tangle of lofty sandstone mountains densely clad with prickly scrub and small-oak forests. This area, known as the Válto, is not accurately mapped,[1] and it was only after three journeys through it that I was able to grasp its structure. Between the coast and the deep valley of the Patiopúlos stream, which lies some fifteen kilometres inland to the east, there stretch three main ridges running parallel to the coast of the Gulf; while their general direction is NNW by SSE, all three ridges at their northern extremity curve westwards and create a system of crowded valleys. The first ridge on the west, the Makrinóros, rises sharply near Anínou in the plain of Arta and ascending through Paleokúla maintains a high level until it sinks steeply into the plain of Loutró at Kríkelo; to the west the Makrinóros ridge falls precipitously into the Gulf and to the east it is cut off by deep valleys from the neighbouring ridge, except at the point Tsanohóri, where the two ridges are bridged by a wide saddle. The second ridge passing through Kastriótissa, Langáda, Ljapohóri, and Ágia Triáda descends abruptly to Loutró; it is cut off from its neighbour to the east by deep valleys, which are difficult to cross; the least difficult route from ridge to ridge runs from Ljapohóri to Valmáda, passing south of the Monastery Áretha. The third and highest ridge also rises by Anínou in the plain of Arta, runs eastwards and then turns SSE by Seriakísi, and passes through Doúnista southwards to Aetolia; this ridge forms the watershed between the streams which enter the Gulf of Arta and the Patiopúlos stream, a tributary of the Achelous; it is most easily crossed by one travelling from west to east at Xerakiá, inland of Loutró. The three ridges, from west to east, reach heights of 402 metres, 692 metres, and 902 metres respectively; farther inland there rise the still higher limestone ranges which enclose the bed of the Achelous and its tributaries.

The mountainous region, which I have been describing, has been called the Thermopylae of the west; for it can easily be defended whether against Philip of Macedon in 343 B.C. or against the Turks in the War of Independence in 1821 and 1829. The modern motor-road from Anínou to Kríkelo winds above the sea through the dense scrub which clothes the steep western slopes of Mt. Makrinóros; the road controls the coast, but is itself dominated by the ridge of Mt. Makrinóros. It is doubtful whether this modern road represents a route used in antiquity; for there are easier inland routes which do not entail the cutting of the Makrinóros scrub and the traversing of its western valleys. For a man and a horse the upper slopes and level tops of the three ridges offer the easiest and freshest routes; in time of war these ridge-routes are easily held. There are three such routes from Anínou to Kríkelo, using respectively the Makrinóros ridge, the Ljapohóri ridge, and the Seriakísi ridge. The easiest route ascends the central ridge via Kastriótissa and Langáda and then crosses at Tsanohóri to the Makrinóros ridge, which is followed as far as Kríkelo; the direct route from Anínou via Paleokúla to Tsanohóri involves a steep ascent to the top of Makrinóros.

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[1] The sketch-map in Leake, *Travels in N.G.* iv p. 242, is rough and inaccurate, and has been reproduced in Henderson, *The Great War between Athens and Sparta* (1927) p. 154. The map in Oberhummer, *Akarnanien*, etc. (1887) and the Austrian staff-map (1914) are unreliable, especially in the positioning of the Argive plain and of the ruins of Argos; the Greek staff-map, of which three of the four requisite sheets have appeared, is the best map available, but the contours appear to me unreliable.

The importance of these routes is best illustrated by the campaign of 1829.[1] The Turks held the area from Arta to Keravassará; General Church, who commanded the Greek forces at Vónitsa (near Anaktorion), decided to intercept a convoy which was known to be proceeding from Anínou to Keravassará. For this purpose he planned an attack by two routes, converging on the Makrinóros ridge; while a land-force marched south and east of Keravassará and ascended the southern spurs of Mt. Makrinóros, his fleet, under cover of dark, landed troops at Menídi below the northern spur of the mountain. The first detachment surprised the southern posts on Mt. Makrinóros and drove the Turks back to Paleokúla, whither the western outposts of the Turkish army had been driven in by the landing-force at Menídi. When the fort at Paleokúla was taken, General Church proceeded to consolidate his control of the routes which lead northwards into the plain of Arta. Placing his headquarters just north of Tsanohóri, he occupied Menídi, Paleokúla, and Langáda, with advance-posts at point 228 on the Makrinóros ridge and at Kastriótissa on the central ridge; the Turks meanwhile threw advance-posts forward from their base at Anínou to occupy the extremities of the Makrinóros ridge and the third (Seriakísi) ridge. By this strategy General Church blocked the two easier routes which lead from the north to the south; the position could only be turned by the inland détour along the Seriakísi ridge. Before the Turks could turn his position, their garrisons at Keravassará Lepanto and Mesolongi capitulated, and the Greek frontier was advanced to the north end of Mt. Makrinóros. It is clear from this campaign that the defence of the western Thermopylae hinges upon the control of the area between Tsanohóri Paleokúla and Kastriótissa. The ancient fortresses at Paleokúla and at Kastriótissa, where wall-remains are visible, were doubtless intended to secure such control.

The area to the south-east of the plain of Loutró is less complex. The route from Loutró to Keravassará passes over the low saddle of the spur which culminates at Paleo-avlí; the alternative route employed by the detachment of General Church's army follows the upper valley of the southern arm of the Botoko stream, which rises in the southern half of the long Seriakísi ridge.

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[1] C. M. Church and J. L. Myres, *Geographical Journal* XXXII (1908) pp. 47 f. with Plan facing p. 52; the Plan is not accurate in detail.

The campaign of 430 B.C. originated in a quarrel between Ambracia and Amphilochikon Argos, which had involved Amphilochia and Acarnania.[1] Argos is described by Thucydides as the largest city in Amphilochia; its territory, called the 'Argeia' as opposed to the 'Amphilochike', must have comprised the alluvial plain which is to-day controlled by Loutró, the largest village in the area. The territory called 'Amphilochike' marched with the borders of the Ambraciote terrain; these borders can be defined by the abrupt geographical break at Anínou between the plain of Arta (Ambracia) and the northern spurs of the three high mountain-ridges. The first step in the quarrel between these neighbours was taken by the Ambraciotes who occupied Argos; they were later expelled by the Amphilochians, assisted by their allies the Acarnanians and the Athenians under Phormio. In 430 B.C. the Ambraciotes and their Epirote allies retaliated by occupying the Argive territory and by delivering an abortive attack on Argos.

In the following year[2] the Ambraciotes conceived an ambitious plan, to conquer Acarnania and gain control of Cephallenia, Zacynthus and possibly Naupactus; for the Ambraciotes counted not only on their allies in Epirus and Macedonia, but also on the help of Sparta. While the Ambraciote forces concentrated at Ambracia, Cnemus in command of 1000 Peloponnesian hoplites was transported to Aetolia; meanwhile the Peloponnesian fleet was mustering at the head of the Gulf of Corinth but, before it sailed, the squadrons of Leucas Ambracia and Anaktorion had concentrated at Leucas. Cnemus decided not to await the arrival of the Peloponnesian fleet; it appears that he united all his forces in the Argive plain, probably near Arápis, where the fleet from Leucas could land troops. It is from this point that Thucydides (II. 80, 8) makes Cnemus start on his march southwards: διὰ τῆς ᾿Αργείας ᾿ιόντες Λιμναίαν, κώμην ἀτείχιστον, ἐπόρθησαν, whence they marched to Stratos. The easiest route from Argos to Stratos passes south of Paleo-avlí to Keravassará whence a long deep rift runs south to Stratos past the large lake known to-day as Lake Amvrakía; as Cnemus commanded a considerable army and as the Acarnanians had already concentrated at Stratos, there can be no doubt that he used this direct route. Limnaea, then, must lie on this route and is presumably the first strategic post met after leaving Argive territory; it is most probably to be identified with the hill of Keravassará, which commands the pass to the south.[3] The expedition of 429 B.C. ended in disaster, and it was three years before the Ambraciotes renewed the struggle.

In the autumn of 426 B.C. the Ambraciotes, encouraged by the promise of help from the Spartan commander Eurylochus at Proschium in Aetolia, marched against Argos with 3000 hoplites; on entering Argive territory [1] they occupied Olpae, a strong and fortified post situated on a hill beside the sea. Olpae had been fortified by the Acarnanians, who had employed it as the scene of assizes for the Amphilochians and themselves; it was some 25 stades (*i.e.*, $4\frac{2}{3}$ kilometres) distant from Argos. The data given by Thucydides fix the position of Olpae at Agrilovúni; [2] it is $4\frac{1}{2}$ kilometres from Argos, it lies on the coast, and it offers a central point for the Amphilochian Argive and Acarnanian meeting-place. As the Ambraciotes had previously arranged to meet Eurylochus before Argos,[3] it is probable that they came via the Makrinóros ridge, entered Argive territory near Kríkelo, and occupied Olpae as the strongest point in the northern part of the plain [4] to await the arrival of Eurylochus.

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[1] Thuc. II 68.

[2] Thuc. II 80 f.

[3] The strong fortifications there date to the fourth century B.C. or later.

The Acarnanians, sending a detachment to reinforce Argos, camped with the remainder of their force at the place in Amphilochia called Krenae in the hope of preventing Eurylochus from slipping through between themselves and Argos to join the Ambraciote army. As the main route from the south runs over the saddle south of Paleo-avlí, the Acarnanians must have occupied a post to the west of that route, since Argos lay to the east; the most suitable point lies in the vicinity of Paleo-avlí, where there are remains of ancient fortification. The name Krenae, 'the wells', is appropriate to the plain just NE of Paleo-avlí, where the Botoko stream runs dry in the summer but water is obtained by digging wells. The Acarnanians then sent to Demosthenes and to the Athenian fleet under Aristoteles for assistance. The Ambraciotes at Olpae, fearing that the Acarnanian dispositions might prevent Eurylochus from joining them and that their own line of retreat might be threatened (*i.e.*, by the Acarnanians and Amphilochians seizing the southern end of the Makrinóros ridge), sent word to Ambracia asking for the full strength of the city to come to their assistance.

Meanwhile Eurylochus had started on his march through Acarnania. On reaching Limnaea, the district south of Keravassará, he turned east into Agraean territory, attained the ridge of Mt. Thyamus in Agraean territory, passed along it, and descended into Argive territory by night; under cover of darkness he slipped between the enemy posts at Argos and at Krenae to join the Ambraciotes at Olpae. Eurylochus thus used the route which General Church's detachment used in 1829; avoiding the direct route through Keravassará, which was visible from Paleo-avlí, Eurylochus turned inland, crossed the upper valley of the Botoko stream's southern tributary, and attained the southern end of the ridge of Seriakísi [1] from which he descended to pass between Paleo-avlí and Argos.

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[1] Thuc. III 105, 1; the Argeia was probably bounded on the north by the foothills of Makrinóros, which would belong to the territory Amphilochike.

[2] So Leake, *Travels in N.G.* IV p. 251; Heuzey, *Olympe et l'Acarnanie* p. 300, in placing Olpae high on the Makrinóros ridge, exceeds the 25 stades given by Thucydides.

[3] Thuc. III 102, 6–7.

[4] It is impossible to say whether Lake Katafórno existed in the fifth century B.C.; it may have done, for the Ambraciotes at Olpae later found themselves cut off from the north.

At dawn the united forces of Eurylochus and the Ambraciotes moved camp to the area called Metropolis. The object of this movement must have been to threaten Argos without losing contact with the line of communication to the north; at the same time Eurylochus, whose strength lay in the Ambraciote and Peloponnesian hoplites, must have remained beside the plain in which his heavy-armed troops could best be employed. The Metropolis, then, is probably to be identified with the area just north of Kríkelo, the central point at which the routes from Amphilochia converge. Eurylochus did not hold the initiative for long. The Athenian squadron of 20 ships entered the Ambraciote Gulf shortly afterwards, and Demosthenes with 200 Messenian hoplites and 60 Athenian archers arrived from Naupactus (probably overland via Limnaea and Krenae). The squadron rode at anchor off Olpae; the Acarnanians and such Amphilochians as had not been cut off by the Ambraciote control of the area round Kríkelo had by this time concentrated at Argos, a fortified base from which they were prepared to engage with Eurylochus.

Demosthenes, being given the command of the allied forces, advanced from Argos and encamped near Olpe, where he was separated from the army of Eurylochus by a large stream-bed.[2] That Olpe is not the same place as Olpae is clear not only from the different form of the two names but also from the strategy of the two commanders; for Eurylochus had already moved away from Olpae to Metropolis (which must have been a move nearer to Argos), while Demosthenes, if he had advanced from Argos across the plain to Olpae on the coast, would have exposed his army, which was predominantly light-armed, to the Peloponnesian hoplites and would have abandoned Argos to the attack of Eurylochus. It thus transpires that Olpe must lie between Argos and Metropolis, and that Demosthenes could reach Olpe by following the foothills on the east side of the plain; we may then place Olpe on the foothills just south of the stream of Loutró, so that the bed of the stream separates his position from that of Eurylochus. After five days of inaction both armies prepared to engage; the forces under Eurylochus being superior, he was emboldened to attack without awaiting the reinforcements from Ambracia; on the other hand, Demosthenes was anxious to engage before Eurylochus received such reinforcements.

[1] Leake, *op. cit.*, p. 251, identifies Mt. Thyamus with the ridge which culminates to the north at Paleo-avlí. But, as the Argeia marches with the territory of Limnaea (Thuc. II 80, 8), the northern part of this ridge cannot have been part of Agraïs; it is more likely that Eurylochus, to escape observation, made a wide détour towards the ridge of Seriakísi, whence he could descend unobserved by the upper Botoko valley into the Argeia.

[2] Thuc. III 107, 3 χαράδρα δ' αὐτοὺς μεγάλη διεῖργεν.

Knowing that his right wing would be outflanked, Demosthenes placed an ambush of 400 troops in a hollow path overgrown with scrub,[1] which was designed to take the overlapping wing of the Peloponnesians in the rear. Such a path overgrown with scrub cannot be seen to-day in the arable plain between Kríkelo and Arápis,[2] nor is it likely that it ever existed so long as the plain was under cultivation; but the stream-bed of Loutró, before it reaches the plain, passes through a valley clad in scrub, and it is probable that the scene of the ambush lay at the mouth of the valley.[3] When the battle was joined, the ambush took the left wing of Eurylochus by surprise, and Demosthenes on the Acarnanian right wing pushed the advantage home. Meanwhile his left wing was defeated and pursued towards Argos by the Ambraciote and allied troops; the returning Ambraciotes, attacked by the successful Acarnanians of the centre and right, escaped with difficulty to Olpae. If the scene of the engagement was at the point where the stream of Loutró emerges into the plain, the distances involved in the Ambraciote advance towards Argos and subsequent retreat to Olpae are reasonable; Argos lies some two and a half kilometres from the scene of battle, and Olpae some four kilometres. As the retreat to Olpae was not the result of choice (for at Olpae the Ambraciotes were cut off from escape to the north), it is clear that the scene of the battle must lie between Argos and the southern end of the Makrinóros range and to the east of Olpae; this requirement is met by the identification here suggested.

The battle had ended in the evening. Next morning the Spartan Menedaïus, having succeeded to the command at Olpae, found himself threatened with blockade from land and sea; for the Acarnanian forces held the plain and the Athenian squadron rode at anchor off the coast. He therefore entered into an agreement with Demosthenes, whereby he should be allowed to escape with his Peloponnesian troops and leave the Ambraciotes at Olpae in the lurch. While Menedaïus was making his arrangements, Demosthenes received information that the full force of the Ambraciotes was coming through the Amphilochi in answer to the summons sent several days earlier from Olpae; knowing nothing of the battle of the preceding day, these reinforcements now intended to join the Ambraciote force at Olpae. The route, by which they would come, ran along the ridge of Mt. Makrinóros. Demosthenes at once sent forward a part of his force to lay ambush along the roads in anticipation of the Ambraciote march southwards and to occupy the strong points; at the same time he prepared to follow to their assistance with the remainder of his army. At this juncture Menedaïus and those who were privy to his agreement with Demosthenes descended from Olpae and pretended to forage in the open plain; when they had already passed some distance away from Olpe,[1] they made off more rapidly. The Ambraciote forces at Olpae, seeing them departing, charged after them at the double, hoping to overtake them. At this point the Acarnanians attacked both the Peloponnesians and the Ambraciotes; later they allowed the Peloponnesians free passage and concentrated their attention on the Ambraciotes, of whom some 200 were slain. The remaining Ambraciotes escaped through them into Agraïs, the adjoining territory, where they were given refuge by the Agraean king Salynthius.

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[1] Thuc. III 107, 3 ἐς ὁδόν τινα κοιλὴν καὶ λοχμώδη; repeated by Polyaenus III 1, 2, with the number of troops given as 300.

[2] Oberhummer, *op. cit.* p. 108 and n. 2 places the scene of the battle on the Botoko river South of Argos, and finds the path apparently in the stream-bed; this seems to me impossible. Heuzey, p. 301, is correct in saying that the plain between Argos and Agrilovúni contains no such χάραδρα or ὁδός, but in placing the scene of the battle as far up the stream as Loutró village he deprives Eurylochus of that access to the plain which was required for the best use of his hoplites. Cf. the objections advanced by Bursian in *Rhein. Mus.* XVI (1861) p. 429.

[3] There are to-day two paths at this point, leading from Loutró to Kríkelo and to Argos, and one could find on either of them such places as Thucydides describes; but his description is intended not to identify the path but to explain its value for laying an ambush.

The retreat of Menedaïus throws further light on the position of Olpe. The escaping Ambraciotes entered Agraïs, which lies to the east or south-east of their position at Olpae; it is thus certain that they did not retreat north towards the Makrinóros ridge whence they would have passed through ‘ Amphilochike ’ into Ambraciote territory. The direction of the retreat was presumably due to the Peloponnesian desire to go south-east towards Aetolia. The forces under Demosthenes were not investing Olpae, for the Peloponnesians could forage in the plain; the Acarnanians must have remained at Olpe, where the stream of Loutró issues into the plain, and it was from that point that Demosthenes could send his detachment unseen by the enemy at Olpae into the Makrinóros foothills. Thus Menedaïus could make his escape either by passing between Olpe and Argos, or by passing between Argos and Krenae (Paleo-avlí). When Thucydides states that Menedaïus moved more rapidly once he was some distance away from Olpe, the implication is that the Acarnanians were at Olpe and that Menedaïus' line of retreat was related to Olpe[2] rather than to Krenae. When the Acarnanians attacked from Olpe and from Argos, they caught the Peloponnesians and pursuing Ambraciotes between two fires; those who escaped passed into the foothills between Olpe and Argos, whence they could march inland through wooded country to the ridge of Mt. Thyamus, the territory of the Agraean king.

On the same day the Ambraciote forces from Ambracia had reached

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[1] Thuc. III 111, 1 προκεχωρηκότες δ’ ἤδη ἄπωθεν τῆς Ὄλπης θᾶσσον ἀπεχώρουν.

[2] This point is repeated in the final mention of Olpe Thuc. III 113, 1 τῶν ἐς Ἀγραίους καταφυγόντων ἐκ τῆς Ὄλπης Ἀμπρακιωτῶν. Agraïs, as we have seen above, marches with the territories of Argos and Limnaea; it therefore comprised the southern end of the Seriakisi ridge, which we have identified with Mt. Thyamus.

Idomene, which consists of two high hills.[1] By nightfall the larger of the two hills was occupied unknown to the Ambraciotes by the advance force sent forward by Demosthenes; the smaller hill had been occupied by the Ambraciotes, who encamped there for the night. After taking their evening meal the remaining forces under Demosthenes' personal command set off at once on the march northwards; Demosthenes with half his force marched upon ' the pass ' as his objective, while the other half marched through the Amphilochian mountains. At break of dawn Demosthenes fell upon the camp of the Ambraciotes, who were unaware of the situation; they were further thrown off their guard by the ruse of Demosthenes, who sent his Messenians forward first because their Doric accent misled the Ambraciotes into believing them to be a detachment of their fellow-citizens from Olpae. A massacre ensued; the fugitives fled over the hills, only to fall into the ambushes set for them the day before and into the stream-beds of the Amphilochian hills, which were unknown to them. In their despair some Ambraciotes fled to the sea, which was not far off, and swam out to the Athenian squadron which was sailing along the coast at the time of Demosthenes' attack. Only a few survivors escaped to Ambracia.

The topography of Demosthenes' night-attack is far from clear in the account given by Thucydides, for there is no precise indication of the position of the two hills known as Idomene. The Ambraciotes, having entered Amphilochia by nightfall, had left their home territory at Anínou; as they believed their compatriots to hold Olpae and to control the Makrinóros ridge, they no doubt had started along the easiest route towards Olpae. Their camp was therefore pitched somewhere on the path running through Anínou, Kastriótissa, Langáda, and Tsanohóri. As Demosthenes marched upon ' the pass ' as his objective, it appears that the pass was not occupied; and the vital point on the route, which may be best styled ' the pass ', is the plateau of Tsanohóri.[2] If Demosthenes occupied Tsanohóri, as General Church did in 1829, he commanded the main pass leading from Ambracia to Argos.

To the north the plateau of Tsanohóri divides into two ridges, that to the west reaching a high point at Paleokúla and that to the east passing through Langáda and culminating in the lower hill of Kastriótissa. It seems probable that these two ridges are the hills known as Idomene; the ridge near Paleokúla will then be Idomene Major which had been occupied by the advance-force sent by Demosthenes on the day before the night-attack, and the lower ridge north of Langáda will be Idomene Minor where the Ambraciotes pitched camp. If we are correct in this identification, the other details are intelligible: the paths in Amphilochia where ambushes had been set would comprise the area east and west of Langáda; Demosthenes, with half of his forces, would march by the Makrinóros ridge to Tsanohóri and the other half would follow the central ridge via Ljapohóri; and detachments could be sent forward from Paleokúla to prevent the Ambraciotes retreating from Langáda via Kastriótissa towards Anínou. Those who escaped to the coast must have passed over the Makrinóros ridge to descend near Menídi; as the whole area is covered with thick scrub, such escape through the troops which surrounded the Ambraciote camp is possible in any direction.

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[1] Thuc. III 112, 1 ἐστὸν δὲ δύο λόφω ἡ Ἰδομενὴ ὑψηλώ; the singular form of the name predominates in Thucydides, the plural form occurring at 113, 3.

[2] The village name ' Langáda ' means ' Pass '; it controls the approach from the north to the plateau of Tsanohóri, and its name affords further evidence in support of our identification.

The distances involved in these operations by Demosthenes are not great. I have walked in one day from Arta to Keravassará, visiting Kastriótissa, Paleokúla, and the ruins of Argos Amphilochikon *en route*; the distance from Arta to Keravassará by the motor-road is 44 kilometres. The march from Arta to Langáda takes some four and a half hours, and from Langáda to Kríkelo some two hours; it is thus clear that Demosthene had ample time to prepare the ground for his surprise attack at dawn on the Ambraciotes at Idomene Minor. The manoeuvres in the plain of Argos are also on a small scale; I have walked from Kríkelo to Agrilovúni in twenty minutes, from Loutró to Argos in one hour, from Argos to Keravassará in some two hours. The skill of Demosthenes lay less in his ability to cover distances quickly than in the skill with which he used his smaller and mostly light-armed forces against the superior army of Eurylochus to whose strength in hoplites the plain of Argos was a favourable battle-ground. The advance of Demosthenes to Olpe from Argos, a strong base, was a bold move; but it was justified by his desire to force an engagement before the arrival of reinforcements from Ambracia and by his choice of the scene for the engagement. Eurylochus, on the other hand, was wise to strengthen his line of communications and to threaten Argos by moving from Olpae to Metropolis; but by encamping on the east side of the plain he enabled Demosthenes to move along the foothills and occupy Olpe, whence he could take Eurylochus in the flank should Eurylochus advance over the plain to Argos. Had Eurylochus waited for his reinforcements, he would have had more chance of driving Demosthenes from the position at Olpe; that he did not wait proved a costly error to Eurylochus and justified the bold advance of Demosthenes.

The Ambraciote relief force had taken seven days to answer the summons sent from Olpae; their commanders were also at fault in failing to send forward scouts to establish contact with their main army in the Argive plain and in failing to post sentries against a surprise attack. Their confidence may have been due to the knowledge that Eurylochus had joined forces with the main Ambraciote army some five days before; for, although Thucydides[1] does not mention it, the information must have reached Ambracia, which was not more than seven hours distant from Olpae. Demosthenes showed his peculiar talent in grasping the opportunity which his intelligence and the opportuneness of the time factor offered; in planning the surprise attack he used his light-armed troops to the full and laid careful plans for an attack from all sides. The night march through the thickets and passes of the Amphilochian ranges would present grave difficulties to a modern army; but Greek troops must often have marched through such country, where a loose formation was necessary, and in northern Greece at least it is not difficult to walk at night under a luminous sky.[2]

In explaining the campaigns of these years I have omitted any discussion of the reconstructions put forward by Leake, Heużey, Oberhummer, Ullrich[3] and others; the reason is that none of them have travelled in the area of Mt. Makrinóros or made a full survey of the Argive plain. In this case geographical knowledge is essential, for the account of Thucydides is far from full; indeed the vague nature of the topographical detail seems to indicate that Thucydides had not himself visited this area but based his account on hearsay. The main outlines are clear, but the identification of such points as Metropolis, Olpe and Idomene is far from certain; the reconstruction I have made is the most probable in the light of my acquaintance with the area. It remains only to explain why the identification of Idomene with Mt. Makrinóros,[4] Idomene Minor being at Paleokúla and Idomene Major a point at the southern end of Mt. Makrinóros, seems to me to be improbable. In the first place Paleokúla does not lie on the easy route, which the Ambraciotes may reasonably be supposed to have followed; secondly, Idomene is described as two hills or peaks, whereas Makrinóros is a long flat-topped sandstone ridge without any division into two hills or into two or more peaks; thirdly, if the Makrinóros ridge was followed from Paleokúla to Kríkelo, there was no ‘ pass ’ in the sense of the word ἐσβολή. The description given by Thucydides suggests rather that Idomene was one mountain-mass with two spurs, which were known as the Idomenae; they were distinguished according to their heights by the titles Idomene Minor and Idomene Major and sometimes described together under the name Idomenae.[1] Such a nomenclature fits precisely the northern part of Mt. Makrinóros where it bifurcates at the plateau of Tsanohóri into two spurs, the more easterly joining the second inland range which descends northwards from Ljapohóri.

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[1] Thuc. III 110, 1.

[2] In the heat of summer caravans of pack-horses prefer to travel by night.

[3] F. W. Ullrich, *Der Kampf um Amphilochien* (1863).

[4] So Leake *op. cit.* IV, p. 250. He had not visited Mt. Makrinóros, which he only saw from the sea (cf. p. 236), nor had he seen the two fortresses he mentions as situated on the mountain; in fact there is no such fortress at the southern end of the ridge. He also talks of a ‘ pass ’ between Mt. Makrinóros and the sea, but this does not fit the narrative and is not, I think, the meaning of the word ἐσβολή. I shall publish elsewhere details of the ancient sites in Amphilochia.

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[1] Thuc. III 113, 3.

THE DOUBLE AXE IN PREHISTORIC EUROPE

One of Professor Myres's outstanding activities within the present decade has been in the re-founding of the old tradition of International Congresses in prehistoric archaeology and in anthropology. Prehistorians of many lands have cause to be grateful for the facilities thus afforded them for getting to know one another better, and for the interchange of facts and ideas, and never more so than when the subject has been one to which Professor Myres himself has contributed. Those subjects are notoriously many, but from the International Congress of Prehistoric and Protohistoric Sciences held at Oslo in 1936—the second of the new series—I recall with especial vividness his contribution, following those of Professors Childe and Menghin, to the discussion on the paper read by Mr. R. W. Hutchinson on Aegean Battle-axes. And it is a great pleasure to be able to turn to my notes—such as they were—of what he said that morning, as a starting-point for my brief tribute in this volume to the inspiration of his many-sided genius. The shaft-hole battle-axe has for long played such a formidable part in the controversy over the origin and spread of the peoples of Indo-European speech, that a clear recognition of the different types or families of shaft-hole weapon or implement, and of their differential significance, has become more important than ever, as on the other hand has appreciation of their underlying kinship. The antiquity of metal shaft-hole axes in the Near East has for some time been clear from the clay models found in the basic culture of Al'Ubaid and Ur, and Mallowan's discovery of the true symmetrical double axe at Arpachiyah, not only as a working tool in stone, but also, and actually earlier, in the form of small stone amulets,[1] has given precision to Sir Arthur Evans's eastern derivation for the double axe of Minoan Crete and its hallowed place in the Minoan religion. It would seem, in fact, to have reached Crete from the Tell Halaf–Arpachiyah culture of North Syria and Assyria, the initial date of which, scarcely later than the fifth millennium B.C., allows ample time before its first recorded appearances in the Early Minoan period. As regards the Aegean, then, we can claim the double axe as a specifically Minoan type with a North-Syrian derivation of its own behind it, and contrast with it the stone hammer-butted battle-axes of Troy and Thermi, with their occasional counterparts in Macedonia, Thessaly, and Central Greece. Similarly, the metal axe-adzes which, like certain metal axe-hammers and later double adzes, have occurred from time to time in Minoan contexts,

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[1] Mallowan *Excavations at Arpachiyah,* Fig. 51, 5, and Pl. X.

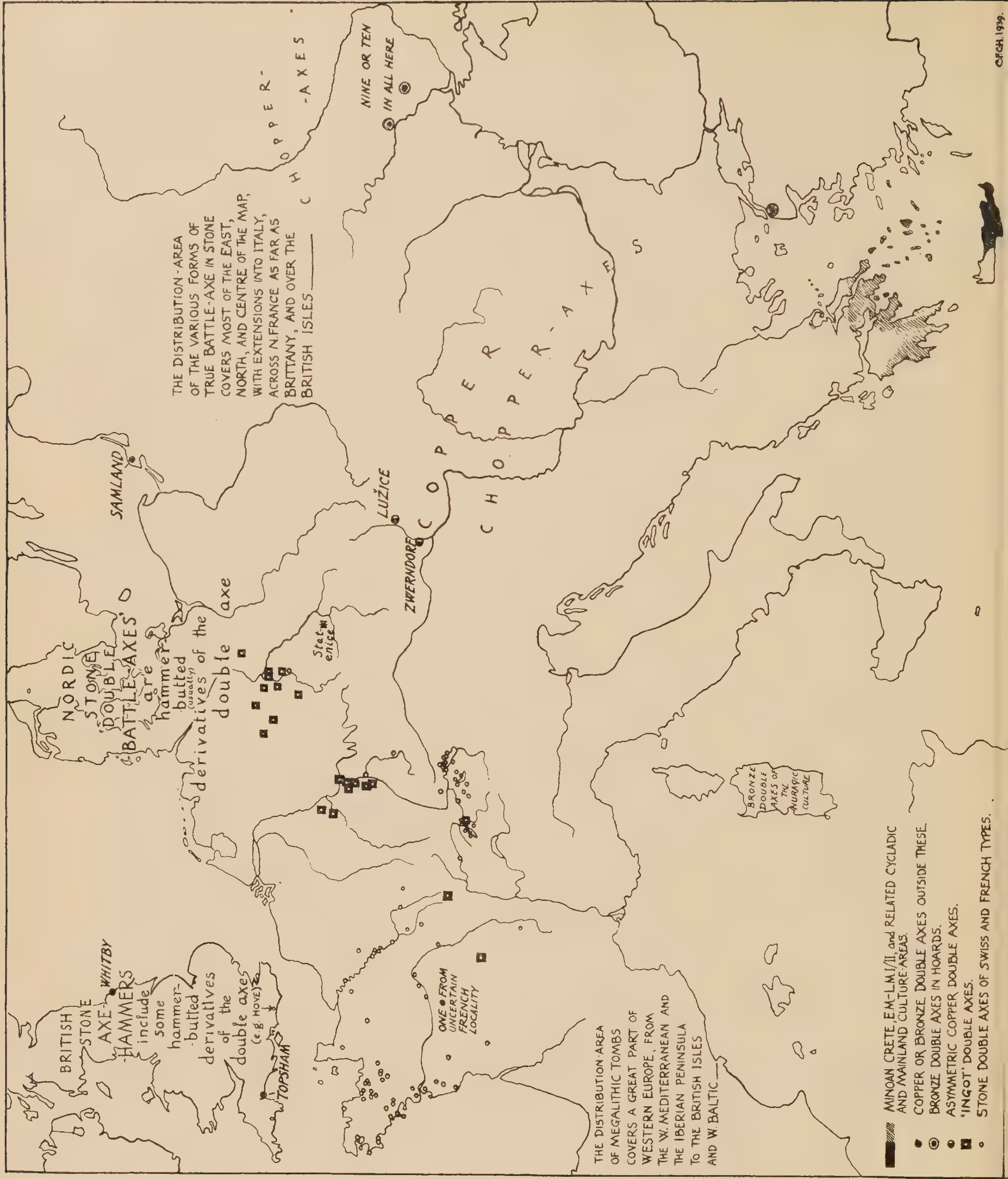
BRITISH STONE AXE-HAMMERS include some hammer-butted derivatives of the double axe (e.g. HOVE)
WHITBY
TOPSHAM
NORDIC STONE 'DOUBLE BATTLE-AXES' are hammer-butted (usually) derivatives of the double axe
Stat-enice
SAMLAND
THE DISTRIBUTION-AREA OF THE VARIOUS FORMS OF TRUE BATTLE-AXE IN STONE COVERS MOST OF THE EAST, NORTH, AND CENTRE OF THE MAP, WITH EXTENSIONS INTO ITALY, ACROSS N. FRANCE AS FAR AS BRITTANY, AND OVER THE BRITISH ISLES
NINE OR TEN IN ALL HERE
CHOPPER-AXES
LUŽICE
ZWERNDORF
COPPER-AXES
CHOPPER-AXES
COPPER-AXES
CHOPPER-AXES
ONE FROM UNCERTAIN FRENCH LOCALITY
THE DISTRIBUTION-AREA OF MEGALITHIC TOMBS COVERS A GREAT PART OF WESTERN EUROPE, FROM THE W. MEDITERRANEAN AND THE IBERIAN PENINSULA TO THE BRITISH ISLES AND W. BALTIC
BRONZE DOUBLE AXES OF THE NURAGIC CULTURE
MINOAN CRETE, E.M.-L.M. I/II, and RELATED CYCLADIC AND MAINLAND CULTURE-AREAS.
COPPER OR BRONZE DOUBLE AXES OUTSIDE THESE
BRONZE DOUBLE AXES IN HOARDS.
ASYMMETRIC COPPER DOUBLE AXES.
'INGOT' DOUBLE AXES.
STONE DOUBLE AXES OF SWISS AND FRENCH TYPES.
C.F.C.H. 1939.

FIG. 1.—MAP TO ILLUSTRATE THE DISTRIBUTION OF DOUBLE AXES AND RELATED FORMS IN PREHISTORIC EUROPE.

are to be contrasted in type with the bronze examples from the ‘ burnt city ’ at Troy (Troy II *c*),[1] and the well-known drooping-bladed copper axe-adzes of East-Central Europe.[2] Along these lines Mr. Hutchinson in his paper contrasted Minoan or Mediterranean-Eastern with European or ‘ Nordic ’ types, and Professor Myres carried his distinctions further back, to a basic classification into simple holed-stone tools or weapons which need have no immediate connexion with metal forms, and genuine derivatives of Near-Eastern shaft-hole types in metal, among which the axe-adze may be referred to a ‘ Black Sea ’ origin typified notably at Maikop on the European edge of the Caucasus, while the Minoan double axe came from the Tell Halaf culture-area to Crete and there began its quite different Mediterranean history.

Following his lead, one can go further still. Professor Childe has pointed out [3] shaft-hole weapons in deer-antler, whose Mesolithic antiquity in the ‘ forest culture ’ of Northern Europe is well known, have palpably influenced the forms taken by both metal and stone battle-axes, and axe-adzes, from the Black Sea region both northwards and westwards. Antler axes, no less than simple perforated types in stone, have then to be reckoned with in the parentage of the ‘ Nordic ’ families of weapon, and the characteristic droop of their blade-form, with the almost universal insistence on giving the battle-axe a hammer-shaped butt, are to be explained in terms of the reaction of these non-metallic types to the introduction of metal weapons from Archaic Sumerian sources across the Caucasus. This happened apparently well back in the third millennium, and the result in the ensuing centuries was the great diffusion of ‘ Nordic ’ stone battle-axes, usually drooping-bladed and characteristically hammer-butted, between the Ural Mountains and the British Isles, with southward extensions including that responsible for the renowned masterpieces of Treasure L in the ‘ burnt city ’ at Troy. And those ceremonial weapons remind us that the hammer-butted battle-axe cannot be written off simply and solely as a business implement, but carries widespread evidence of symbolic significance as a ‘ thunder-weapon,’ an attribute of masculine divinity, in the warrior religion of the peoples who wielded it. Over against this we have to set the symmetrical double axe of Crete (Fig. 2, 1–2) and its no less dominating significance in the religion of the Minoans (cf. 3). Need we be content to believe that its rôle in prehistoric Europe was restricted to Aegean or at least to Mediterranean lands, and that it attained no further diffusion at all comparable to that of its hammer-butted ‘ Nordic ’ counterpart? The object of this paper is to call attention to what seems evidence to the contrary.

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[1] *Schliemann-Sammlung* 6479–81; Dörpfeld *Troja und Ilion* II, 292 and 404. I owe the references to Mr. Hutchinson.

[2] Childe *Danube in Prehistory*, 203 ff.

[3] ‘ Eurasian Shaft-hole Axes ’: *Eurasia Septentrionalis Antiqua* IX (Minns volume, 1934), 157 ff.

Professor Menghin has, I believe, been the first in recent years to claim a Cretan derivation for any shaft-hole weapons in Europe outside the generally recognised limits of direct Minoan influence.[1] In part VI of his *Weltgeschichte der Steinzeit*, having pointed out that the Danubian cultures of Central Europe had a simple type of holed-stone implement peculiar to themselves, and that the answering Neolithic cultures of Western Europe had originally no sort of holed-stone axe of their own, he turns to the North, and recalls that while Mesolithic perforated implements there do not include any true axe in stone, shaft-hole stone axes are a prominent feature of the ensuing Neolithic. He adopts Åberg's view that the basic type here is no other than the symmetrical double axe, and while we may follow him in rejecting that author's impossible derivation of this from the West, and improve upon both of them by confining the hammer-butted shaft-hole battle-axes already noticed to the distinct place in the story now usually agreed for them, it remains true that the original stone shaft-hole axe-type of the Northern Neolithic is a sort of symmetrical double axe (Fig. 2, 6), and that some derivation is required for this from outside Northern lands. The context of these Northern axes is not the so-called Single-Grave culture which brought to the North, as to so much of the rest of Europe, the hammer-butted, drooping-bladed, and asymmetrical battle-axe as above defined: it is the aboriginally-founded culture which in a large measure adopted the rite of interment in megalithic tombs, and so is often (though not quite properly) called the Northern Megalith-culture. It is generally accepted to-day that the megalithic rite reached the North from the Atlantic West, where it had been implanted from the Mediterranean, but we have seen that there is no sign of the double axe as an original feature of any Western culture-group. Menghin accordingly suggests that just as the non-perforated 'thin-butted axe' in polished flint or stone was engendered in this Northern culture as a lithic rendering of the flat axes of copper which towards the end of the third millennium B.C. began to reach the North overland across Central Europe,[2] so these perforated stone double axes are lithic renderings of copper double axes, which will have been brought across Central Europe from a southern home which in the circumstances he feels it reasonable to identify as Minoan Crete. As a connecting link he quotes the copper double axe in the Vienna Hofmuseum from Lužice in Moravia, published without appreciation of its significance by Åberg in 1918 [3] (Fig. 2, 5).

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[1] Menghin *Weltgeschichte der Steinzeit* (1931), 419–20. On Montelius' observations of 1898, and Evans' at the British Association in 1896, see below p. 150 (n. 2), and p. 158 (n. 8).

[2] Cf. Forssander *Der Ostskandinavische Norden während der ältesten Metallzeit Europas* (Lund, 1936), 7 ff.

[3] Åberg *Das Nordische Kulturgebiet in Mitteleuropa* (Uppsala, 1918), 91–2 and Abb. 192 (Vienna Hofmus. 28101).

Now the Danubian world of Central Europe displays from around the middle of the third millennium onwards progressively multiplying signs of influence from the Aegean-Anatolian-East Mediterranean regions. Beginning already earlier with ornaments made of Spondylus shell,[1] these come to include much else beside ornamental substances, and the most potent of all is of course the naturalisation in Inner Europe of the metallurgy of copper. The precise point of departure of such influence can indeed seldom be determined, but Professor Childe has drawn attention to the presence on Danubian sites of this period—his Danubian II—of cup-hollowed cubical blocks of clay with perforated corners which can, it seems, only be copies of

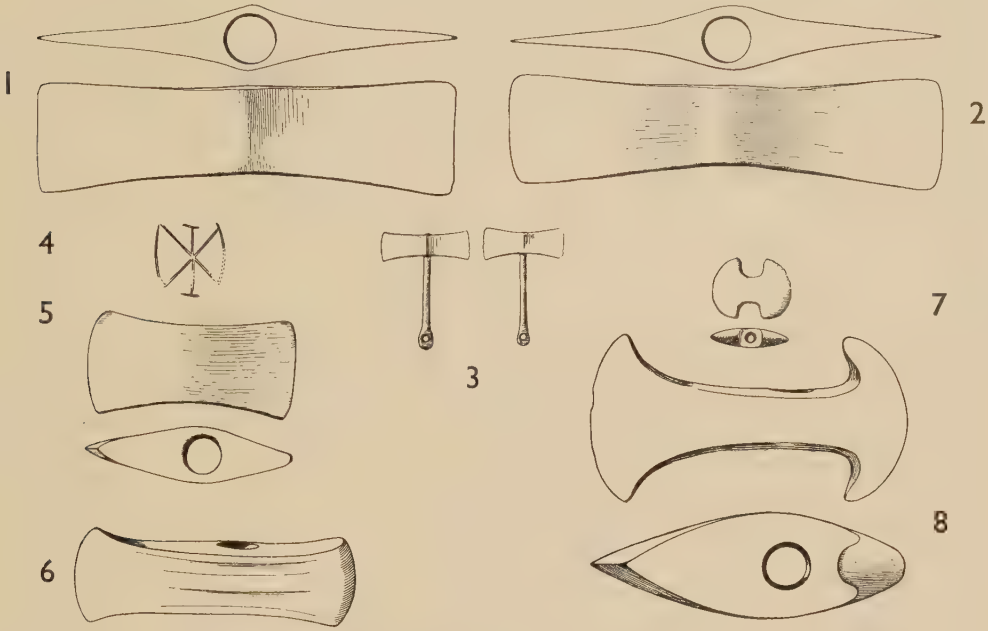

Fig. 2.—1, 2. Bronze Double Axes of Minoan Type.
3. Bronze Votive Double Axes of Minoan Type from Crete.
4. Double-Axe Symbol Incised on Danubian Pot, Statenice, Bohemia (*after Neustupny*).
5. Copper Double Axe, Lužice, Moravia (*after Åberg*).
6, 8. Stone Double Battle-Axes, Megalithic Culture, Denmark (6 *after Nordman*).
7. Amber Double-Axe Pendant, Megalithic Culture, Denmark.

Scale 1 : 4.

1–3, 7–8, British Museum; 4, National Museum, Prague; 5, Hofmuseum, Vienna; 6, National Museum, Copenhagen.

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[1] Buttler *Marburger Studien* (1938), 27 ff.

the stone ‘ pepper and salt ’ vases peculiar to Early Minoan II–III in Crete.[1] And this indication has recently been improved upon by Neustupny's discovery of the double-axe symbol itself at Statenice near Prague, deliberately—and centrally, with evident talismanic intention—incised both inside and outside the base of a pottery bowl, belonging to a settlement of the local culture of Danubian I type contemporary with early Danubian II (Fig. 2, 4).[2] The same symbol appears to be attested, though less obviously, on several other sites of this culture in Bohemia and Moravia, and though Neustupny misguidedly proposed a date some five centuries later, the true dating can hardly be much after 2500 B.C. This should indeed be the earliest known occurrence of the double axe, symbolic or otherwise, on the mainland of Europe; the admissibility of Minoan contacts does not diminish thereafter, so that if the Lužice copper axe is rightly dated together with the other southern-inspired copper types which appear in Danubian lands in the centuries following, it will be by no means out of place. And the last two or three centuries of the third millennium are just the period when in turn Danubian lands were beginning effective contact with the North, as witnessed by the diffusion and imitation in flint of the flat copper axes above mentioned, which represent as early a type of tool as any to be made of native-smelted European copper. So far, then, Menghin's hypothesis appears well founded, for the Northern stone double axes are revealed in a context which definitely admits of their derivation—albeit indirectly—from a Minoan source.

But in fact neither the Lužice copper double axe nor the Northern stone weapons are symmetrical double axes in the strict sense. As can be seen from Fig. 2, 5, 6 and 8, the shaft-hole both in the one and generally speaking in the others is somewhat displaced towards one end of the weapon, and this end, though its lateral profile may begin by balancing that of the sharp blade at the other (no. 6), becomes differentiated in various ways (*e.g.*, no. 8), and in particular is from the first in the great majority of cases a blunted and more or less hammer-like butt. These two tendencies need not indeed always operate together. Another asymmetrical copper double axe has been found in Central Europe since Menghin wrote, at Zwerndorf in Lower Austria,[3] and in this the shaft-hole divides the body in the proportion of 5 to 2, though both ends are equally sharp. Similarly, in the North the axes with the most hammer-like butts are not necessarily those with the most displaced shaft-holes. But broadly speaking, this whole range of

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[1] Childe *Danube in Prehistory*, 93; *AJA* XLIV (1939), 23 (quoting Schránil, *Vorgeschichte Böhmens und Mährens*, Pl. VII, 2); cf. Pendlebury *Archaeology of Crete* (1939), 69–70, 86, with Pl. X, 3*b*).

[2] *IPEK* 1936–37, 16–31 (based on Neustupny's article in *Pamatky archaeologicke* IV (XL), 1936.

[3] *Wiener Prähistorische Zeitschrift* XXIV (1937), 77–81.

European double-axe modification, in so far as it is not mere stylisation of the tendency to splay out the blades which is inherent in the ancestral type, is obviously due to the influence of other types of shaft-hole weapon. In the first place, the single-bladed copper ' chopper-axe,' with its shaft-hole right at one end, achieved a considerable prominence towards the end of the third millennium from South-eastern to East-central Europe[1]: one is known from Bulgaria, many in Transylvania and Hungary, a few in Moravia, and a single outlier in Silesia, while a mould for an axe of this class has occurred in the pile-settlement of Laibach, and the developed form with a projecting shaft-tube has a still wider distribution,[2] attained probably about and just after 2000 B.C. These axes seem to go closely with the axe-adzes of the same East-Central European ' Copper Age ' mentioned earlier, and may like them have a ' Black Sea ' derivation: several are known in South Russia,[3] and there is not a dissimilar type at Maikop itself.[4] But it is not impossible to bring them with the double axe itself to Danubian Europe from Crete,[5] since like forms occur in the island from Early Minoan times.[6] In any case, the partial assimilation of our asymmetrical double axes to this chopper form, and the absence from Danubian Europe of double axes not so modified, show that there was there now no interest in the type except for business purposes: no sanction from the Minoan religion was at work, as has been suggested in the earlier case of Statenice, to protect the classic symmetry proper to it. But in the second place, we have also the rather different sort of asymmetry shown by the Northern stone axes. It consists of a greater or less displacement of the shaft-hole towards a normally blunted and so hammer-like butt, and is evidently to be ascribed to the influence of the Northern culture's ancestral antler and simple holed-stone implements, whose importance in such reaction to the introduction of shaft-holed types in metal has in general been touched on above. In fact, in adopting the double axe and rendering it in stone, the North modified its form in accordance with its own traditions.

Yet these elements of modification do not upset, but rather make more credible, the hypothesis of Minoan derivation. Consideration of them has shewn that while as early as the Danubian II period the double axe seems to have achieved sporadic recognition in Central Europe as a symbol of some supernatural significance (Statenice), yet in the centuries that lead thereafter into the ' Copper Age ' the type only appears there as a scarcely even independent member of a whole group of purely business shaft-hole weapons. And, with their South Russian connexions, the chopper-axe, the axe-adze, and the hammer-butted variants that are also known, are far more closely related to the true ' Nordic ' stone battle-axes, the warlike diffusion of which was indeed just at this time beginning. Now as regards the North, the battle-axe diffusion was effected by the invasion of the Single-Grave culture, from somewhere in Middle Germany into Schleswig-Holstein and Jutland, which took place about 2000 B.C. But, when these invaders arrived, they found the territories round the Western Baltic in the possession of the Northern Megalith-people, and it was these Megalith-people who had already by then adopted and ' naturalised ' in stone the double axe in the way we have been discussing. Their modifications of its form may lead us to call the results not actual double axes but rather ' double battle-axes ' (*Doppelschneidige Streitäxte*), in consideration of the displaced shaft-hole and tendency to hammer-buttedness; but it remains none the less a striking fact that when the true ' Nordic ' battle-axe was brought to the North by the Single-Grave invaders, there ensued no sort of compromise or hybridization between it and these ' double ' weapons of the Megalith-people. The two families remain absolutely distinct, in a way which shows the ' double ' weapon to have had a remarkably strong hold in the Megalith-people's culture. Why was this? Evidently because it was no mere exotic, but a type spontaneously adapted to fill a place in their equipment that they felt to be essential. Yet in so adapting it they kept enough of the double-axe shape to leave that shape still the most distinctive thing about it. To some extent this was no doubt because their adaptation was done not at several removes from the original, but with actual imported copper double axes before them. For one such has survived, though indeed only on the periphery of their main culture-region. This is a double axe of classic Minoan form, found in the district of Samland on the coast of East Prussia, the only one of its kind known in Baltic Europe; it has been published by Šturms, who rightly points out its importance in connexion with the Northern ' double battle-axes ' of stone, and notes that one of the few of the latter which show only a minimal amount of modification in type was found at Groddeczek in West Prussia not far away.[1] But the survival-value displayed by the stone ' double battle-axe ' series once so engendered requires a further explanation, and this must surely be that whereas the various overrunnings of Danubian Europe by battle-axe-using ' Nordic ' invaders prevented anything of the kind there, the Megalith-people of the North had, before those invaders interposed, received from the South not merely actual copper double axes, but the cult of the double axe as a sacred symbol. The feasibility of its reaching them we have seen: it remains to ask the reason for their accepting it. And that is not far to seek: they had already received, by the Atlantic and North Sea route round the West of Europe, a religion of Mediterranean origin, outstandingly embodied in the rite of the megalithic tomb, the Minoan version—and perhaps original—of which is the tholos-ossuary of the Cretan Mesara. True, there is no trace of the double axe as a primary element in the religion's diffusion round West-Mediterranean and Atlantic Europe. But there is abundant evidence of the ordinary unperforated single axe as such an element: such polished stone axes have been found in quantity in Iberian and French tombs, notably in South Spain, Portugal, and Brittany, and though these are rare in the British Isles, the quantities of the corresponding flint and sometimes stone axes found in the Northern megaliths themselves make it clear that reverence for the single axe was from the start a leading feature in the religion as these people in the North received it. It can then be claimed that their spiritual culture would have been fertile soil for receiving likewise the idea of the specific sanctity of the double axe, if as we have argued this could have reached them, together with actual axes, by an overland route across Europe within the latter part of the third millennium. And in further support one need only adduce the perforated axe-amulets of amber so frequently found, along with the actual stone axes, in their tombs (Fig. 2, 7), which present such a close analogy to the votive double axes (Fig. 2, 3) of the Minoan world.

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[1] *Dacia* III–IV, 1, 352–5; *XXII Bericht Röm.-Germ. Komm.* 76 (abb. 15), 77 (note 300).

[2] Childe *Danube in Prehistory*, 213–14 and Fig. 113.

[3] *ESA* II, 172 and Fig. 98, 1–2; cf. Fig. 99, 3.

[4] *Id.* Fig. 99, 1.

[5] So Childe *ESA* IX, 163 and note 30.

[6] *E.g.* Childe *Dawn of European Civilization*, ed. 1, 34, Fig. 13, 1–2.

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[1] Šturms *Die Ältere Bronzezeit im Ostbaltikum* (Vorgeschichtliche Forschungen, Heft 10, 1936), 5–7 and Taf. I, *d*.

It is now possible to go further and see that as in the North, so also in the West, the Megalith-people of this age may have received knowledge of the double axe and its supernatural significance by an overland route from a Minoan source, and have proceeded to incorporate a cult of it into the religion they had initially received by sea, from the same or a related source, without this feature but with that of unperforated single axes only. There is indeed no evident branching-point for such an overland route to the West in Danubian Europe, but once outside the Danube basin evidence for it comes at once to hand, and this is best introduced by drawing attention to the recently-published demonstration by Witter that the most important centres of early metallurgy in the central area of Europe lay not within the Danube basin, but in the mountain region of Middle Germany, principally in the Harz and Thuringian mountains and the Vogtland in the neighbourhood of Oelsnitz.[1] This is not the place to go into the great mass of mineralogical, technological, and archaeological evidence which he adduces, but it will suffice to say that it is in this region, rather than anywhere else nearer the higher courses of the Danube, that one should look for the earliest metallurgical centres in Inner Europe likely to have attained importance in supplying the North and equally the West. And one of the most noteworthy copper or near-copper products of these Middle German workings is nothing other than the double axe in yet another form, retaining with all faithfulness the two-bladed symmetry of the Minoan type, but combining considerable size and weight with a diminutive shaft-hole in a way that marks it out as designed for no practical use (Fig. 3, 1–2). The type was first recognised from a number of examples found in Middle and West Germany, and was at first thought to be votive,[1] but Montelius in 1898 [2] and 1900 [3] lent the weight of his authority to the view that they were ingots or units of currency, and the matter was subsequently taken up by Lissauer and brought by him to the notice of Aegean archaeologists at the Athens Congress of Archaeology in 1905. His results, published the same year [4] and soon supplemented,[5] were accessibly summarised by Déchelette in 1910,[6] and with the addition of a new specimen [7] again by Childe.[8] Occasion is here taken to publish two specimens in the British Museum not previously illustrated, one (Fig. 3, 1) originally in the Tower of London collection, the other (2) in that of Lord Avebury, neither with a recorded provenience, though the Museum's third specimen (in Lissauer's list) comes from Kochem on the Mosel. The case for regarding these axes as ingots rests partly on analogy (cf. the Greek πέλεκυς), partly on their approximation in weight to a series of multiples of a standard unit of some 500 or 600 grammes: for example, the Kochem specimen weighs 2535 grammes and our no. 2 3260,[9] or four and five units of a 600-gramme standard, while our no. 1 is the lightest yet published, with a unit weight of 500·02 grammes. In the ensuing Early Bronze Age of Central Europe the same standard appears in the long, narrow and asymmetrical form of double axe best known from the great hoard of Neuenheiligen; [10] this need not further here be considered, but its Mid-European distribution accords with the account now to be given of the copper or near-copper ingot-axes now in question. For their geographical range, between Central Germany and Central France, has always hitherto been interpreted (following Lissauer) as implying a route of introduction running north and east inland from the Mediterranean coast of France, whither the type was presumed to have

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[1] Witter *Die älteste Erzgewinnung im nordisch-germanischen Lebenskreis* (Mannus-Bücherei Bd. 60, 1938).

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[1] *E.g.* Much *Die Kupferzeit in Europa* (1893), 80–3; cf. Virchow in *Z.f.Ethn.* 1891, 460.

[2] In his 'Chronologie der ältesten Bronzezeit': *Archiv f. Anthropologie* 25, 456–61. He observes that European double-axe forms in general should be related to the 'East-Mediterranean' metal type, though the Minoan material was of course then unknown to him.

[3] *Congr. Internat. Anthr. Arch. Préhist.*, Paris 1900, 340–1.

[4] *Z.f.Ethn.* 37, 519–25.

[5] *Id.* 770–2, 1007–9.

[6] *Manuel d'Archéologie* II, 1, 403–7.

[7] *Bonn. Jahrb.* 123, Beilage, 105; *id.* 127, 109. For another (not on map) see p. 159.

[8] *Danube in Prehistory*, 177, 193.

[9] *Brit. Mus. Bronze Age Guide* (1920), 137–8.

[10] *Id.* with Fig. 146; Childe *Danube in Prehistory*, 243, with Fig. 143, top.

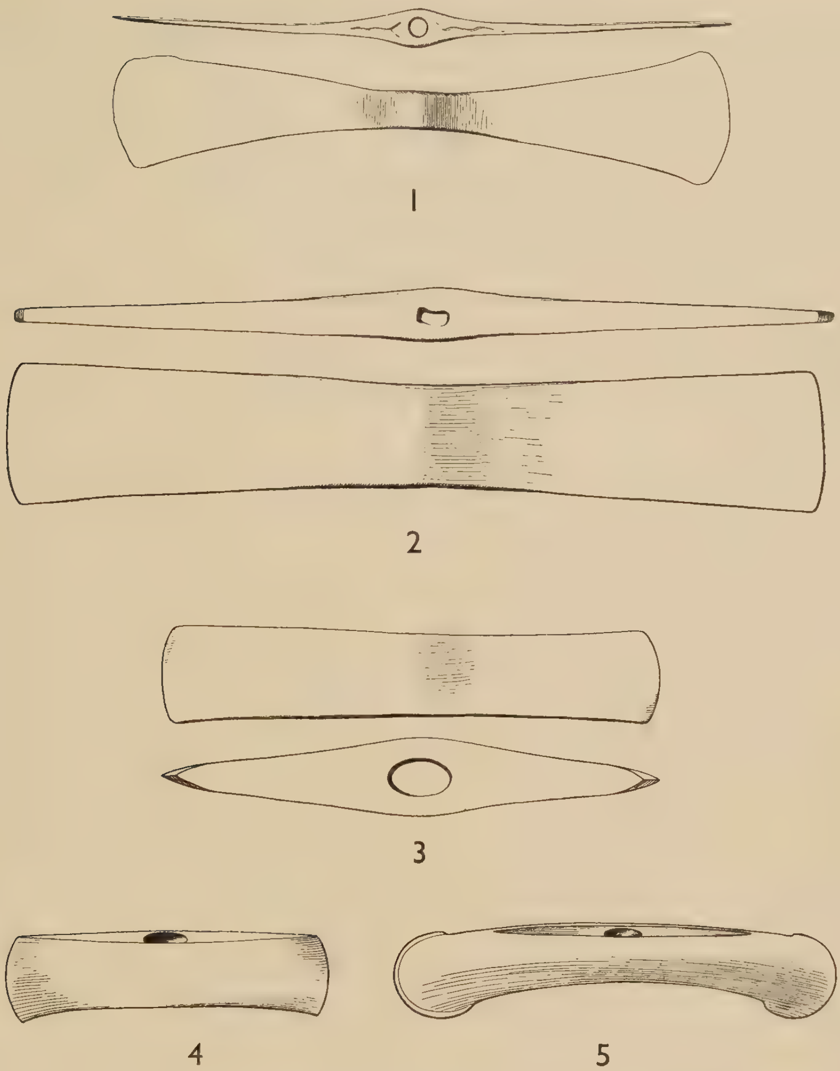

FIG. 3.—1, 2. COPPER INGOT DOUBLE AXES OF WEST-CENTRAL EUROPEAN TYPE.
3. STONE DOUBLE AXE OF SWISS TYPE, WALDKIRCH-AY, BADEN (*after Reinerth and Åberg*).
4, 5. STONE DOUBLE AXES OF FRENCH TYPES, SEINE AT GRIGNY AND PARIS (*after de Mortillet*).

Scale 1 : 4.

1–2, British Museum; 3, Rosgarten Museum, Constance; 4, St. Germain Museum; 5, Fillion Collection.

been introduced by sea from the Levant. But Witter's demonstration by spectrographic analysis that test-specimens examined by him are of Mid-German metal[1] necessitates a different view: in fact, the type must have been created in the copper-bearing belt of Middle Germany, through which the route we have envisaged for the northward travelling of the Minoan double axe must have passed, and where examples like that quoted above from Samland were very probably made.[2] Its distribution must accordingly be reckoned to start from there and spread westward, by way of the Middle Rhine, into France, and this then would seem to be the overland route by which the double axe, as we have postulated, reached the Megalith-people of the Atlantic West.

Witter's analyses further confirm the dating of these ingot-axes in the period before the beginning of the Mid-European Early Bronze Age at about 1800 B.C. They consist either of copper pure of tin—a result already arrived at by other than spectroscopic methods for several given in Lissauer's list—or copper with less than 1 per cent. of tin, and this agrees with his findings for characteristically 'Copper Age' types such as the plain flat axe. Furthermore, of the specimens found outside Germany, one comes from the Swiss pile-dwelling of Lüscherz (Locras) on the Lake of Bienne, the culture of which is typically Late Neolithic—in the main, it would seem, that now known as the Horgen culture (see below)—with the addition of an incipient copper-industry,[3] and no later. The whole chronological horizon may in fact be confidently put within the centuries round 2000 B.C. Now by that time the phase of the Northern Megalith-culture characterised by the stone 'double battle-axe' derivatives of the double axe was already established; but this was not, so far as we know, followed up by any reception there of the Mid-German metallic currency which the ingot-axes must represent. A find of one in the North may one day upset this notion, but in any case the invasion of the warrior Single-Grave people, sweeping along the Elbe and into Schleswig-Holstein and Jutland just at this time, may well have created a barrier which helped to deflect part of the Mid-German metal-trade into a new channel, not northward but westward and south-westward to the Rhine, Switzerland, and France. The adoption of the double-axe form for currency-ingots implies that it had a prestige value which shows the sanction of its religious significance to have been still at work, and no doubt actual double axes of the same metal, invested with the same prestige, were brought along this route, just as was the Samland example northwards, for there now appears in Switzerland a new and this time an exact rendering of the double-axe form in stone, the connexion of which with the route is shown by the presence of further examples in both the Rhineland and the Mid-German distribution-areas covered by the ingot double axes of copper (Fig. 1: the Mid-German specimen comes from Trotha, Saalkreis). The numerous representatives of this stone type in Switzerland and the adjacent borders of Germany (Fig. 3, 3) were evidently locally produced from metal prototypes: they have shaft-holes as a rule made by the primitive pecking method, and most often not cylindrical but, as in the specimen here illustrated, of an oval form unnatural to stone but often found in metal double axes of Minoan pattern.[1] Their frequent occurrence on lake-side sites in Switzerland and all round Lake Constance connects them naturally with the pile-dwelling populations, and Reinerth[2] and more unequivocally Vogt[3] assign them to the same context as is indicated for the Lüscherz ingot-axe—that of the Horgen culture, where they stand out in inevitable contrast to the hammer-butted battle-axes of the contemporary 'Nordic' intruders.[4]

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[1] See the analyses given by him in *Die älteste Erzgewinnung usw.* (p. 149, n. 1), I, as follows:—Tabelle I, nos. 50–1 (p. 230), with text p. 116; Tabelle II, nos. 135–8 (p. 236), with text p. 121. These results are covered by the summaries on pp. 120–1, 124.

[2] This has unfortunately not actually been analysed.

[3] Reinerth *Die jüngere Steinzeit der Schweiz*, evidence in lists 231 ff. ('Westische Keramik' here actually includes both pottery of the Michelsberg and the Horgen culture (see abb. 49, 50, 59) as defined by Vogt *Germania* 18, 89–94; 'Mischkeramik' here also the Horgen or Horgen-Altheim culture, into which 'Süddeutsche Schnurkeramik' intrudes: see Vogt. *id.*); Forssander, *Ostskandinavische Norden* (p. 144, n. 2), 18 ff. For the axe itself, see Ischer, *Die Pfahlbauten des Bielersees*, 32 and 94–6 with Taf. XI, 1.

And beyond Switzerland and the Rhine, from the Doubs valley westward, stretches the distribution-area of the directly analogous stone double axes of France (Fig. 3, 4–5), which reach their greatest frequency (Fig. 1) in the classic region of the Atlantic Megalith-culture in Brittany. Like the ingot axes, the French examples of which at Cîteaux and Nohan lie within the same distribution-area, they have been credited with a western origin,[5] but in harmony with what has been said above we can only regard their diffusion as proceeding from Switzerland towards the West, though the route along which it passed was indeed that by which such western merchandise as the famous flint of Le Grand Pressigny, and point-butted axes of polished Breton greenstone, came simultaneously in the opposite direction. They are quite numerous in Central France, and it is probable that the middlemen in their westward diffusion, as in the eastward diffusion of greenstone axes and Pressigny flint, were the inhabitants of this region whose culture is known to archaeology as the Seine-Oise-Marne culture.[6] For this is closely related, indeed apparently parental,[7] to the Horgen culture which we have just seen adopting the double axe in Switzerland, and as well as having this eastward relationship it had just before this also been carried by migration westward into the Megalithic province of Brittany.[1] And it is notorious that these people had come to possess their own distinctive form of Megalithic culture, manifested in subterranean stone-built *allées couvertes*, and in answering chalk-cut grotto-graves on the walls of which sculptured representations of the single axe in its haft [2] bear out the evidence of the multitude of actual flint axes buried in all these tombs for the sanctity of the axe in their religion. Thus they, no less than the Breton Megalith-people with whom they expanded into contact and whose single-axe cult has been already mentioned, would be natural recipients of the idea of the especial sanctity of the double axe, which would seem to have reached them overland from their Swiss cousins and the metal-working focus in Middle Germany. And double axes of stone, already fairly common in their area, become still more so in the Breton Megalithic province,[3] where, to complete the chain of argument, magnificent whole or broken specimens have on occasion been found actually buried in megalithic tombs.[4] All these regions of France are likewise characterised by hammer-butted shaft-hole axes made similarly in stone, and influence from the Northern Megalith-people, with whom there were connexions anyhow by sea (pp. 144, 149 above), are sometimes discernible both in these and the ' boat-shaped ' form of double axe (Fig. 3, 5) which now arises as a variant of the true *bipenne* (Fig. 3, 4) and has been mapped with it in Fig. 1. But the primary form of the latter cannot, as we have seen, have come round by the North, and there seems no serious objection to its derivation on the lines here proposed.

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[1] Menghin *Weltgeschichte der Steinzeit*, 398.

[2] *Chronologie der jüngeren Steinzeit in Süddeutschland*, 56–7; *Die jüngere Steinzeit der Schweiz*, 188, with abb. 74–5 and map 8.

[3] *Germania* 18, 94.

[4] Thus Åberg *Nordische Kulturgebiet* (p. 144, n. 3), 39, with abb. 40–1, and Menghin, *loc. cit.*

[5] Thus Childe (developing Reinerth, *locc. citt.*), *Danube in Prehistory*, 177.

[6] Childe *Arch. Journal* LXXXVIII, 49–51 and map, 45, fig. 2.

[7] Jacquetta Hawkes *Antiquity* VIII, 38–40; Vogt *Anzeiger f. Schweiz. Altertumskunde*, XL (1938), 1, 1–14.

[1] Kendrick *The Axe Age*, 31 ff.; Daryll Forde *Man* 1929, 80; Jacquetta Hawkes *Archaeology of the Channel Islands, II : Jersey* (1939), 7–9.

[2] Déchelette *Manuel d'Archéologie* I, 585.

[3] The distribution of stone double axes in France mapped in Fig. 1 has been compiled from those noticed by John Evans *Ancient Stone Impts* (ed. 2), 186–7; de Mortillet *Musée Préhistorique* (ed. 2), Pl. LVIII, 631–2; Déchelette *Manuel d'Archéologie* I, 516–18; Le Rouzic *L'Anthropologie* XLIV, 502–5; Hure *Bull. Soc. Préhistorique Française* XV, 261 ff.; Cabrol and Pauron *id.* XXXIV, 487–8 (Fig. 7); and the classified lists given by Marcel Baudouin *id.* XII, 291 ff., and Aveneau de la Grancière and Harmois *id.* XIII, 230, 280, 308 ff., in which double-axe types have been picked out from hammer-butted forms.

[4] The most notable is that from the tumulus-burial (not actually megalithic, but of this same culture) at Kervadel, Plobannalec, Finistère: *Matériaux* 1881, 265 ff., Pl. VI, Figs. 8–8 *bis* (274); reproduced by Forde *Antiquaries Journal* VII, 17, Fig. 4, 1 (cf. 18, 31, 37). Part of another comes from the fourth lateral-chambered megalithic ' dolmen ' at Kervinion near by (*Matériaux id.* Fig. 2–2 *bis*: Forde *id.* 5), and in the Morbihan Le Rouzic publishes examples from Mané-Meur (Quiberon) and Le Moulet (Brech): *L'Anthropologie* XLIV, 502–5, Figs. 14, 1, 15 and 16, 1; both are megaliths of his ' dolmen à galerie ' class 2 (*id.* XLIII, 235 ff.). Lastly, there is part of one from the east chamber of the transeptal gallery-grave of the Grand-Carreau-Vert (St. Michel-chef-chef), Loire-Inf., found with a bell-beaker and pieces of plain pottery: *Matériaux* 1886, 284 ff., Figs. 2 and 8.

Indeed, its obviously direct modelling on a metal prototype[1] makes it likely that metal double axes, such as we have postulated farther east, passed into France just as did the ingot axes of Cîteaux and Nohan. And in fact, as well as those, one true double axe in metal (with oval shaft-hole) is known from France (Fig. 4, 1). It is in the British Museum, to which it

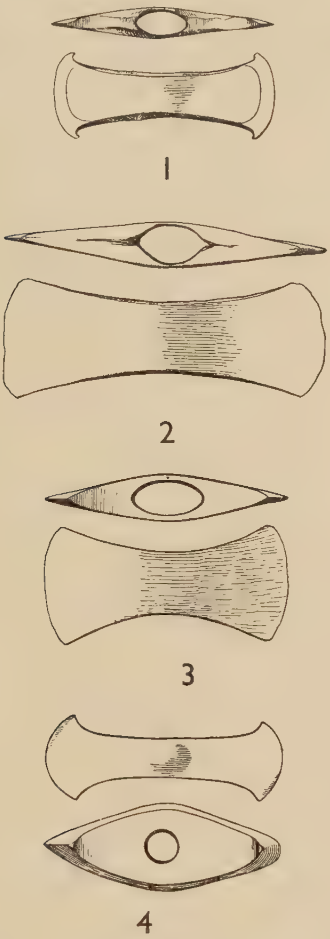

FIG. 4.—BRONZE DOUBLE AXES: 1, FRANCE; 2, TOPSHAM, DEVON; 3, WHITBY, YORKS; 4, STONE DOUBLE BATTLE-AXE FROM EARLY BRONZE AGE BARROW-BURIAL, HOVE, SUSSEX (*after Smith*).

Scale 1 : 4.

1, 2, British Museum; 3, Craven Museum, Skipton; 4, Brighton Museum.

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[1] Appreciated by Le Rouzic *L'Anthropologie* XLIV, 504.

was presented by A. W. Franks in 1893; unfortunately it is not known in what part of France it was found. Now as will be seen from the Appendix, this double axe is made not of pure or near-pure copper like the ingot axes, but of bronze, with 92·5 per cent. of copper to 7·1 per cent. of tin; it is not usually considered that a true Bronze Age began in France earlier than in Central Europe, where 1800 B.C. has been given above as a rough 'central' date, and thus though the associations quoted above must be allowed to keep the first westward coming of the type some two centuries earlier, it can be presumed—as indeed it may on general grounds—that it remained current until after the French Bronze Age had begun, about the end of the first quarter of the second millennium.[1] It is in fact very possible that knowledge of the deliberate alloying of copper with tin first reached Brittany, where the earliest (Iberian-inspired) metal-work of the Megalith-people was in copper only, from Central Europe by the same route, and within the same period, as the double axe; and in this connexion it may be significant that the natural occurrence of copper and tin in Brittany is most frequent in the east and north,[2] in just those regions which were opened up less by the original Megalith-people than by the Seine–Oise–Marne immigrants[3] with whom that route may be connected. Such knowledge would however be slow to issue in true bronze production, as it was even in Central Europe. Quite soon after their coming, about 1900 B.C., Brittany's earlier contributions to the Atlantic coasts of the British Isles were followed by the migration of Breton Bell-beaker folk into Wessex which created the British B 1 Beaker culture, and the associated metal daggers are still pure or nearly pure copper.[4] But by 1700 B.C. a full Bronze Age culture was brought to Brittany by invasion from the east (see n. 1), and thence by a group largely of the same people to Britain likewise.[5] The centre of their civilization was in Wessex, but their outliers stretched into S. Wales, Devon, and Cornwall, and northward as far as Yorkshire; though they were 'Single-Grave' folk, with a large measure of descent from the battle-axe people of 'Nordic' Europe, yet their partial tinging with the old Megalithic religion is shown by their adoption of the pottery 'grape-cups' and (in a modified form) of the 'vase supports' of Breton Megalithic tomb-ritual,[6] and by their well-attested devotion to the chief of the famous circle-monuments to which the Breton stone circle—through the Beaker folk just mentioned—had made an essential contribution,[1] Stonehenge. And on the coast of Devon and on that of Yorkshire, made of such bronze as must have been current about the time of their arrival, have been found two double axes, our Fig. 4, 2 and 3. The Devon specimen comes from Topsham at the mouth of the Exe, just opposite Brittany, where it was found about 1911 by a labourer digging in a market garden near Mount Howe, and was bequeathed to the British Museum by the late Mr. Garraway Rice, F.S.A., in 1933. The Yorkshire axe comes from Whitby, and is now in the Craven Museum, Skipton, whose Curator, Mr. F. J. N. Dufty, has kindly allowed it to be analysed in the British Museum and illustrated here: it was first published by Dr. F. Elgee in 1930.[2] Both have oval shaft-holes like Fig. 4, 1.

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[1] The earliest French Bronze culture would seem to be the so-called Rhône culture in the east, which Ünze (*Die Vorgeschichtliche Triangulläre Vollgriffdolche*, 1938) has shown to be contemporary with those of Central Europe and Upper Italy; thence springs the Armorican or Breton culture, the invasion of which Piggott (*Proc. Prehist. Soc.* IV, 1, 64–6, 94–5) has dated between 1800 and 1700 B.C.

[2] See F. Kerforne's paper and map in *Bull. et Mém. Musée de Penmarc'h* (Inst. Finistérien d'Études Préhistoriques), 1926.

[3] Forde *Man* 1929, 80.

[4] Piggott *Proc. Prehist. Soc.* IV, 1, 55 ff.: daggers, *Devizes Mus. Cat.*² 23, X50*a* (Roundway) and Stourhead 81 (Mere); *Wilts. Arch. Mag.* XLVII, 178, n. 3 (Winterslow).

[5] Piggott *loc. cit.*

[6] Piggott *loc. cit.* 69 ff.

Just where either axe was made it is at present hard to say. Without further finds the only evidence will be the analysis of their metal, kindly made for me, with that of the French axe Fig. 4, 1, by Dr. H. J. Plenderleith. Until a large number of spectrographic analyses of early metal objects from the British Isles and France has been published to balance what Witter has given us from Central Europe, any attempt at precision would be premature. Elgee thought the Whitby axe might have come from Central Europe across the North Sea, or even from the Aegean by long-distance trade. Relations across the North Sea at this time were certainly close, and they may have included contact with the last of the old Northern Megalith-culture, which was just at this time about 1700 B.C. succumbing to the Single-Grave and Stone-Cist folk on whose foundations the Northern Bronze Age was later to be built. In one of the graves of the Wessex invaders, at Normanton in Wiltshire, the ornaments included a double-axe amulet or bead, exactly like Fig. 2, 7, but of British shale instead of Baltic amber.[3] And though the leader of the series of British shaft-hole axes in stone is undoubtedly the 'axe-hammer' form of battle-axe introduced about 1800 B.C. by the A Beaker immigrants from between the Rhine and the Elbe, yet a double-axe element thereafter becomes discernible in several ways (*e.g.* Fig. 4, 4, from the Hove barrow-burial), which must have been in part inspired by the Northern 'double battle-axes' just now dying out in Denmark, in part perhaps by forms derived from Brittany, whether actual double axes (most probably in their 'boat-shaped' form, Fig. 3, 5) or their hammer-butted counterparts.[4] In any case the results lasted far into the British Bronze Age, and the British Bronze Age and the Aegean were not by any means strangers. The evidence for their contact has of late been strikingly summarised by Piggott, in a memorable crescendo [5] which begins with the gold-mounted amber discs found both in Wiltshire barrows and the Tomb of the Double Axes at Knossos, and runs through detail after detail to end with the 'owl-face' and 'butterfly' designs on the Folkton drums of Yorkshire chalk. And of our two double-axe sites, Topsham is at the mouth of one of the finest harbours in the region of Britain that has produced the Rillaton parallel to the corrugated gold cups of Shaft-grave IV at Mycenae, and the Hammeldon Down example of the gold *pointillé* dagger-hilts common to Wessex, Brittany, and Mycenae and elsewhere in Greece, while from the moors near Egton just inland from Whitby comes no less an exotic than a "Cypriote" dagger[1]—between which and the specimens claimed as from Hungary and Austria[2] may be noted that from Switzerland, found in the bed of the Thiel close to the Lüscherz pile-dwelling with its ingot double axe,[3] and another recently reported from Dricourt in French Lorraine.[4] The implied connexions must have run through those Mid-European regions where the prestige of the double axe first caused the adoption of its form for metal ingots to serve such trade, and where the Bronze Age still kept a memory of it in the narrow type we have noticed at Neuenheiligen. Thereafter, while away in South Russia double axes appear in Bronze Age hoards directly recalling 'Treasure' P from the Sixth City of Troy,[5] and in the peculiar Nuragic culture of the Sardinian Bronze Age there are double axes with their own Aegean origin apparently not earlier than Late Minoan times,[6] the type and its sanctity faded from North-Western Europe, and after the Minoan civilisation that had started its diffusion there had passed away, it recurs only in the form of the Late Bronze Age metal ingots of the West Alpine and neighbouring districts,[7] which foreshadow its further appearances as mere currency in historic times.

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[1] Piggott *loc. cit.* 57.

[2] Elgee *Early Man in N.E. Yorkshire*, 62–4, Fig. 20, 1 and Pl. XI, 1; he regarded it as probably of copper: actually it has 8·9 per cent. tin, as compared with 3·3 in the Topsham axe and 7·1 in the French.

[3] Piggott *loc. cit.* 70 (Fig. 8, 7), 83.

[4] R. A. Smith *Archaeologia* 75, 77 ff.; Piggott *loc. cit.* 83.

[5] *Loc. cit.* 95–6.

C. F. C. Hawkes.

British Museum.

[1] Elgee in *Whitby Gazette*, 27 Nov. 1936, 12, with photograph.

[2] Childe *Danube in Prehistory*, 218–19 and map VI. Reinecke (*Germania* 17, 256–9) eliminates the Austrian (and a Swiss) specimen, and rejects the Hungarian ones as dealers' pieces: he also doubts the Thiel example (n. 4) on account of its patina. But an occasional wandering of these hook-tanged daggers to Europe remains a possibility. As Mr. J. R. Stewart has kindly made clear to me, the type is not native to Cyprus, but has a wide range in the Near East: the earliest known comes from Megiddo.

[3] Ischer *Die Pfahlbauten des Bielersees*, 94, abb. 79.

[4] *Bull. Soc. Arch. Champenoise* 32 (Dec. 1938), 161–2.

[5] Tallgren *Pontide Préscythique* (*ESA* II), 161–2 (Chtetkovo), 162–3 (Kozorésovo), 173; Dörpfeld *Troja und Ilion* I, 394–5: cf. Schliemann *Ilios* no. 1429–30 (I cannot trace the Hungarian specimen).

[6] Childe *Dawn of European Civilisation* (ed. 1), 106–7; Bosch Gimpera *Comm. Internat. Préhist. Médit. Occidentale*, Barcelona 1935, 29–35.

[7] Montelius *Civ. Primitive en Italie* I, Pl. 34, 15; Déchelette *Manuel d'Archéologie* II, 407. Their ultimate Aegean derivation was pointed out by Sir Arthur Evans in his British Association address at Liverpool in 1896 (*Report*, 921).

APPENDIX.

Analysis of Bronze Double Axes from France and England (Fig. 4).

By H. J. Plenderleith, D.Sc.

	Copper.	Tin.	Lead.	Antimony.	Arsenic.	Calcium.	Iron.	Silicon.	Silver.
1. France . .	92·5	7·1	trace	trace	trace	0	0	trace	0
2. Topsham . .	94·3	3·3	1·5	0·7	0	trace	trace	trace	trace
3. Whitby . .	90·6	8·9	trace	trace	trace	0	0	0	0

Absent from all three specimens: Bismuth, Cobalt, Gold, Nickel, Zinc.

ADDENDUM TO DISTRIBUTION OF INGOT DOUBLE AXES.

(P. 150, notes 4–7: map Fig. 1, p. 142). Kraft *Die Kultur der Bronzezeit in Süddeutschland* (1926), 13–14, abb. 1: copper specimen from Zimmern, OA. Rottweil (Württemberg). Lying on the Neckar line between the Middle Rhine and Swiss distribution areas, this find merely confirms the view taken in the text.

DISQUES SOLAIRES
MIS AU JOUR AUX FOUILLES D'ALACA-HÖYÜK

En ma qualité de membre de la Société d'Histoire Turque, j'ai assumé la direction des fouilles exécutées depuis 1935 à Alaca-Höyük, au nom et par ordre de ladite Société. Quiconque désire suivre la marche générale de ces travaux, pourra puiser tous renseignements utiles dans nos rapports détaillés y afférents. Les rapports concernant les travaux effectués en 1935 et 1936 ont déjà paru. Celui destiné à faire connaître les résultats importants de l'année 1937, 1938 et 1939 est en préparation.

Dans l'ouvrage présent, consacré à la célébration du soixante-dixième anniversaire de l'éminent et savant professeur Myres, je me bornerai à classifier, du point de vue typologique, les disques solaires trouvés à Alaca-Höyük, en soulignant les particularités qu'ils présentent dans leur évolution.

Epoque. Tous les disques ont été trouvés dans la couche de culture appartenant à l'âge du Cuivre. Cette époque, séparée de l'ère hittite par une épaisse couche portant les vestiges d'un incendie, présente une épaisseur de 4 à 5 mètres et contient quatre couches architecturales. Les tombes y ont été découvertes à des profondeurs variant entre 5 et 9 mètres; il est pourtant improbable que toutes appartiennent à la même couche architecturale. Nous inférons l'époque des disques mis au jour dans les tombes, parmi certains objets, de grande valeur, en or et en argent, en nous basant sur les trouvailles de céramique du type d'Alishar et d'Ahlatlibel, faites simultanément.

Mode d'Inhumation. Il est conforme au système appelé 'Schachtgräber' par les Allemands: Après avoir creusé une fosse quadrangulaire, on y place le mort dans la position dite 'hocker,' la tête généralement tournée vers l'Occident. On pose à côté de lui les disques solaires, les idoles, les statuettes de cerf et de taureau qu'il adorait, ainsi que des offrandes telles que des plats en or et en argent. S'il s'agit d'un homme, on y ajoute ses armes, et si c'est une femme, les parures qu'elle portait. Puis la tombe est soigneusement fermée au moyen de grosses poutres en bois, dont les interstices sont ensuite remplis de terre glaise. Après cette opération les têtes et les jambes de trois ou quatre paires de bœufs—rarement de chèvres et de porcs,—tués en sacrifice, sont placées de façon très régulière sur la tombe. Les autres parties des corps de ces animaux ont dû sans doute être consommées, lors du festin funéraire, offert pour le repos de l'âme du défunt.

Nous avons découvert au dessous de certains murs se trouvant à proximité de quelques tombes des ossements humains en tas, qui n'étaient toutefois

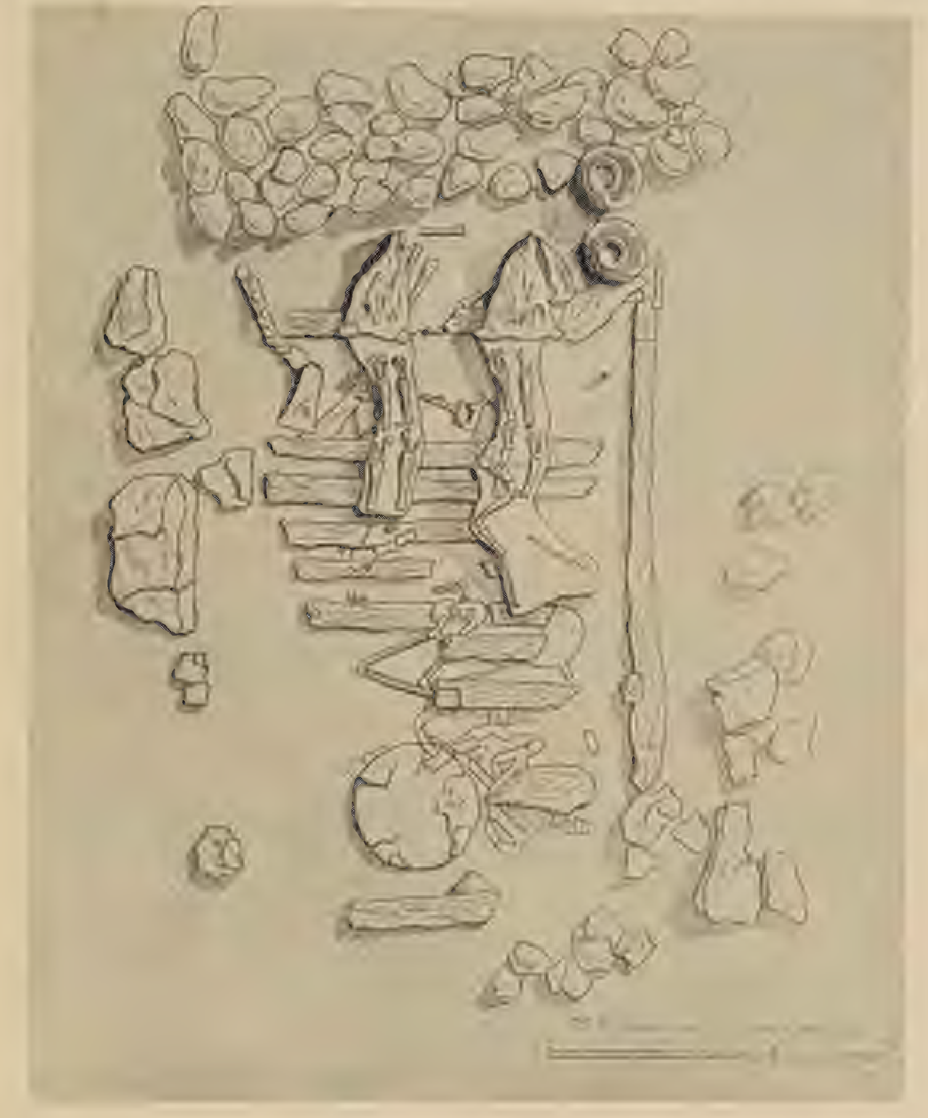

Fig. 1.—Croquis Représentant le Mode d'Inhumation.

pas accompagnés des objets funéraires habituels (exemple: Tombe C.).

D'autre part, nous avons découvert un crâne isolé, sur les pierres rangées indiquant le rebord de la tombe (exemple: Tombe E.).

Il est probable que nous nous trouvions ici vis-à-vis d'une coutume d'holocauste. Les squelettes complets de chiens, découverts auprès du mort, indiquent que les animaux qu'affectionnait ce dernier étaient sacrifiés et enterrés avec lui.

Les disques solaires d'Alaca-Höyük affectent les formes les plus diverses, des plus simples jusqu' aux plus complexes composées de figures d'animaux totémiques. On trouve dans une même tombe un disque simple à côté d'ouvrages accusant une conception et une composition artistiques pouvant rivaliser victorieusement avec les œuvres des sculpteurs de nos jours. Cela montre que la simplicité de la forme n'est pas un critère absolu pour l'ancienneté de l'ouvrage et que des formes anciennes ont dû être conservées jusquà des époques plus récentes. En outre, il convient de ne point oublier que des facteurs tels que le niveau social du mort, les différences de fortune, etc. . . . sont susceptibles d'y jouer un rôle. Soulignons pourtant que les compositions les plus évoluées ont été découvertes surtout dans les tombes B,H et D situées dans la couche supérieure.

Passons maintenant en revue les différents types qu'offrent les Disques Solaires :

Tableau I (Pl. 13).

Le disque est formé d'un simple cercle avec quatre rayons, ou d'un cercle dont l'aire est sillonnée de barres en diagonale. Ces sortes de disques étaient sans doute fixés à un manche ou un mât.

Tableau II (Pl. 14).

Comparés à ceux du tableau 1, ces disques présentent une forme plus évoluée. Le No. B. 1071 est un losange; la partie servant à fixer le disque au manche est pourvu d'un dispositif pour le passage d'une courroie.

Tableau III (Pl. 15).

Les formes sont ici un peu plus évoluées par rapport à celles du tableau précédent. Le No. D. 5 a quatre satellites, dont trois sont fixes et un mobile. Dans B. 653 on ne voit qu'un seul satellite.

Tableau IV (Pl. 16).

Ces deux disques affectent une forme proche du demi-cercle. Près des disques, et notamment de celui numéroté E. 4, on a découvert une sorte de crochet servant probablement à leur suspension.

Le disque H. 1065 comporte sept satellites fixes et un mobile. E. 3 a cinq satellites fixes et trois mobiles.

TABLEAU V (Pl. 17).

Nous voyons ici près de la base deux bras en forme de corne, probablement chargés d'un sens religieux et astral. Il est possible que ces deux bras symbolisent la lune.

TABLEAU VI (Pl. 18.)

Le disque B. 655 est en forme de losange et porte à chacun de ses trois angles un satellite quadrangulaire. La grille de l'intérieur est composée de croix gammées.

Dans la tombe H. on a trouvé, parmi les objets d'ornement, des croix gammées en or. On peut considérer ce disque comme un document attestant que la croix gammée elle-même représente le soleil.

Dans le No. 654 les branches portant des bourgeons se terminent par des figurines de disque.

TABLEAU VII (Pl. 19).

Le disque B. 1071 consiste en un anneau portant des bourgeons.

Dans D. 2, le disque-anneau est tordu en spirale et accuse la forme d'une ceinture. Un cerf y est placé à l'intérieur.—Le cerf symbolise ici, sans doute, le soleil.

TABLEAU VIII (Pl. 20).

Nous voyons ici la vue de face et la vue latérale du disque marqué D. 1. Un chevreuil sacral est placé à l'intérieur de ce disque à grillage.

TABLEAU IX (Pl. 21), *a* et *d*.

Un cerf, et deux lions, en sens inverse de ce dernier, sont placés à l'intérieur du disque B. 657. Les animaux portent des masques en or, possédant, sans doute, une signification religieuse. Le bois du cerf, représentant en même temps les rayons du soleil, est de proportions exagérées et arrive jusqu'aux bourgeons placés à la partie supérieure de la ceinture.

Dans B. 656, nous voyons un cerf et deux faons placés dans le même sens.

TABLEAU X (Pl. 22).

Dans ces figures, le disque solaire a disparu, pour faire place à la représentation exclusive de l'animal totémique.

Importance des Trouvailles. Grâce aux ouvrages mis au jour à Alaca-Höyük, nous constatons l'existence, en Anatolie, d'une culture très élevée, au 3^e^ millénaire avant J.-C. Ces objets rappellent avant tout les riches trouvailles d'Ur, qui leur sont contemporaines. Certains de leurs motifs peuvent être comparés aux ouvrages de Mycènes et de Maykop, postérieurs par rapport à eux. Placés sous l'angle de la conception générale, nous observons toutefois ici l'influence manifeste de la culture des peuples des steppes eurasiatiques sur celle de l'Asie antérieure. Les principaux représentants de cette culture primaire, appelée aussi, dans sa phase postérieure, culture des peuples cavaliers, sont les peuples altaïques, et parmi eux les Turcs. Les statues de cerf et de taureau, employées comme têtes d'étandard, peuvent être interprétées comme de ' Grands Ancêtres ' revêtant la forme d'animaux miraculeux et trahissant une vision thériomorphe du monde. (Voyez les œuvres initiatrices d'Alföldi ainsi que celles de savants comme Andersson et Koppers.) Cela est confirmé par le fait que les disques solaires sont découverts simultanément avec d'autres objets de culte dans les tombes. Pour la comparaison des trouvailles d'Alaca-Höyük, les échantillons de la collection Heydt nous fournissent les spécimens les plus approchants. (voyez René Grousset : *L'Empire des Steppes*, 1939, p. 633.) Ces derniers objets appartiennent aux Hiungnu, qui vivaient sous ce nom, avant notre ère, aux confins de la Chine, et dont l'appartenance à la race turque a été mise en lumière grâce à des documents de linguistiques. L'ouvrage : *Alaca-Höyük III* étudiera les objets présentés ici-même du point de vue

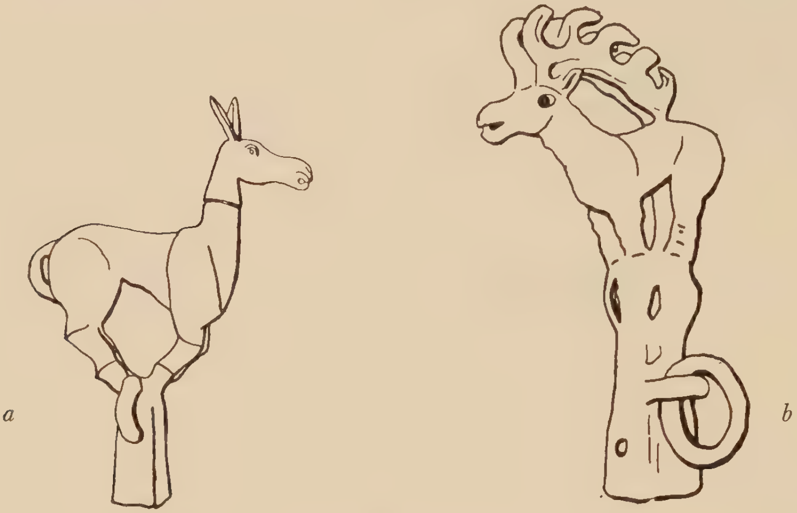

FIG. 2.

a. BICHE, BRONZE HIUNGNU, RÉGION DE L'ORDOS. (Coll. von der Heydt).

b. CERVIDÉ, BRONZE HIUNGNU, RÉGION DE L'ORDOS. (Coll. von der Heydt).

de la morphologie culturelle, établira une comparaison entre ces derniers et les trouvailles appartenant à l'Eurasie septentrionale, et traitera notamment de l'importance du cerf miraculeux dans cette zone de culture, ainsi que de son influence sur les religions de Grèce et de Rome, en prenant en considération ses relations avec le culte du soleil et de la lune.

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SOME WEST ANATOLIAN VASES AT CAMBRIDGE

Abbreviations Used in this Paper.

BM Cat. = *Catalogue of the Greek and Etruscan Vases in the British Museum.*
OIP = *Oriental Institute Publications, University of Chicago.*
PFK = Bittel, *Prähistorische Forschung in Kleinasien.*
Thermi = Lamb, *Excavations at Thermi in Lesbos.*

UNSTRATIFIED finds from prehistoric sites are not without value, provided that something is known of their place of origin. Lacking a pedigree, they still have, as it were, a passport; and any of them that belongs to a civilisation inadequately represented in this country deserves a welcome. I have, therefore, taken this opportunity of introducing a group of early West Anatolian vases which has for many years been in the Fitzwilliam Museum at Cambridge;[1] the moment is appropriate, for, had they been published sooner, when their home was more unfamiliar to us than it is now, they would have been less informing; while to delay their presentation might involve their eclipse by rivals with fuller credentials.

I have used the word 'group' loosely: the pots are not all of the same period or from the same site. They may come from the same dealer, since four were purchased from Van Lennep of Smyrna in 1909 by Professor Ridgeway, and the other four were acquired for the museum in 1908 by Professor Wace,[2] who had twice visited Smyrna in that year. Professor Ridgeway bequeathed his collection to the Fitzwilliam in 1926.

The find-spots, recorded in the inventory for all vases save one, are not, of course, authenticated. On the whole, I am inclined to believe that Ephesus, Philadelphia and Sardes really produced nos. 125, 128, 129 and 26.8 assigned to them below, but I doubt whether any specimen was unearthed at Yortan. We are familiar with the style of the orthodox 'Yortan class'; its fabric, its shapes are distinctive. Recently our attention has been called to certain vases said to come from the same cemetery which are unorthodox;[3] they are later in date and their shapes and fabrics vary, so that some scholars think that they were collected elsewhere, and others that they were the furniture of late graves. Yet even those suspected aliens are not like our nos. 127, 26.10, 26.11. It is, however, obvious that seven of the eight examples described in this paper are from western Anatolia, while the crucible, which has no marked Anatolian characteristics, may well belong there too. The jugs, the collar-necked jars, and the bowl are typical of the ‘ western culture ’, being comparable to material from stratified sites, and sufficiently individual to supplement in a small way our knowledge of the Anatolian potter’s repertory.

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[1] Professor Myres has examined these vases and discussed them with me, and their publication is a small token of my gratitude.

[2] Professor Wace has kindly supplied information on this point, as well as investigating the crucible, 26.8; his comments will be found on p. 170.

[3] Hutchinson, in *Iraq* II pp. 213, 214.

Pl. 23*b*. Inv. 128. *Tripod jug.* From the shoulder in front projects a knob, and between this and the handle are scars shewing that other knobs had originally been applied there. The surviving one is somewhat reminiscent of a spout, but its fellows must, to judge from the size of the scars, have been broader and different in form. On the handle are four ridges and three grooves. Oddly enough, the base of the pot, between the feet, is flat.

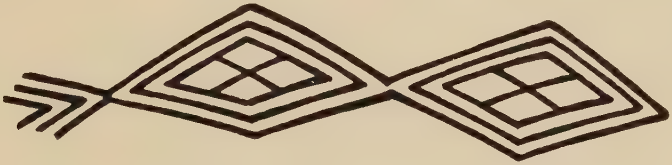

Fig. 1.

Hand-made, of coarse dark grey clay containing mica. The surface has been slightly polished by strokes, mainly vertical, which are clearly seen on the neck and on some parts of the body. A pattern in paint, presumably though not obviously white, can be traced below the handle and followed a little way round the right side above the widest part of the body. This pattern consists of complicated lozenges arranged in a horizontal band (fig. 1); when the vase is damped, one detects the presence of other elements, such as a vertical chevron near the handle and a rectangle in front.

Ht., ·248 m. ‘ From Koula near Philadelphia.’ Purchased in 1908.

I can identify no village near Alaşehir (Philadelphia) which could be transcribed as Koula, but Alaşehir itself is mentioned on p. 120 of *PFK* as the find-spot of a stone axe at Oxford, and there are other axes and a chisel in the British Museum.[1] The district is well within the bounds of the west Anatolian culture: the vase too is definitely ‘ western ’, akin to, without being identical with, the Yortan type. Other relatives can be found at Thermi and Kusura, for instance *Thermi*, pl. XII, 115 and *Archaeologia* LXXXVII, pl. LXXXIII, 2.

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[1] I am indebted to Mr. Christopher Hawkes for shewing me the implements in the British Museum from Anatolian sites.

The use of paint was commonest in the second ceramic phase of Thermi, in other words, towns III and IVa, but practically unknown in the third.[1] Though the dates proposed for Thermi III and IVa are tentative[2] and though paint may have had a longer popularity on other sites, we need have no hesitation in calling the Cambridge vase early, and placing it in the first half of the third millennium rather than the first two thirds.

Pl. 23*d*. Inv. 129. *Ribbed jug.* The ribs are not simply diagonal; in some places they curve slightly at the ends like the letter S, and they avoid the base. All this would happen naturally, as the potter worked over the globular surface. The lip is cut away, the handle plain. A chip at one side of the mouth is the only blemish.

Hand-made, of greyish black clay containing mica: burnished surface. Ht, ·223 m. From Sardes. Purchased in 1908.

The British Museum contains five polished stone axes and a shaft-hole axe labelled *Sardes*, nor is the presence of a prehistoric site thereabouts improbable.[3] Our jug owes its peculiar character to its disproportionately small mouth and its handsome ribbed decoration, which is as effective as that on the askoid jug from Yortan, *BM Cat.* I, 1, pl. I, A. 32. This decoration dies out in Thermi IV and V:[4] further east, at Kusura and Alişar, it may have survived longer.[5] In view of the westerly position of Sardes, we may, I think, use the evidence from Thermi and date no. 129 between 3000 and 2500 B.C.

Pl. 24*a*. Inv. 125. *Small jug*, ornamented with three knobs. It is hand-made, of greyish buff, slightly micaceous clay; and it has a thick red-brown slip mottled grey in parts and polished. Pattern of irregular chevrons and lines in greyish white paint.

Ht., ·108 m. From Ephesus. Purchased in 1908.

Several other prehistoric objects, said to come from Ayasoluk (Ephesus) or its neighbourhood, are known to me: besides the crucible, described below, there are in the British Museum a number of stone axes, two of which are perforated, and a fine bronze specimen.[6]

Our no. 125 is an unpretentious little vase, of a fairly common shape. It gives the impression of being later than no. 128, and should be compared with *Thermi*, pl. IX, 296.

Pl. 23*c*. Inv. 26.11. *Collar-necked jar.* There are two doubly pierced lugs at the sides, corresponding with single string-holes in the rim, one of which has been chipped off. Evidently these holes were made to facilitate the attachment of a disc-shaped lid.

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[1] *Thermi* pp. 82, 85.

[2] *Thermi* pp. 210–11.

[3] See *PFK* p. 132, where another find from Sardes is mentioned.

[4] *Thermi* p. 85.

[5] For Alişar, see *OIP* XXVIII p. 164, from which one might infer that ribs were made there till the end of Alişar I in the twenty-fourth century. For Kusura see *Archaeologia* LXXXVII pp. 235–6.

[6] *Cf. PFK* p. 121.

Hand-made, of dull grey micaceous clay. The surface has been worn away in many places, but some polish survives on the body and more on the neck. Here are brown flecks which might have been taken for slip had there been any elsewhere. On the lugs are roughly impressed lines; on the body, incised patterns once filled with white.

Ht., ·205 m. 'From Yortan.' Bequeathed by Professor Sir William Ridgeway, 1926.

The irregularity of outline and incision, together with the inferior quality of the clay, makes the attribution to Yortan unlikely. Apart from the fact—which may or may not be relevant—that formal angular patterns are rare in the third ceramic phase of Thermi,[1] the style of the vase points to a date not too early and not too late in the third millennium.

Pl. 24*b*. Inv. 26.9. *Tripod collar-necked jar,* the feet missing. The two lugs are singly pierced, while in the neck, above each lug, are string-holes for the attachment of an overlapping lid. Between the lugs are bosses. One foot has left a hole, having been stuck through the body; the other two were fixed in depressions from which they have been dislodged. Hand-made, of grey clay, slightly micaceous, with a few red patches. The surface was originally polished, and faint traces of painted chevrons may be observed.

Ht., ·11 m. 'From Asia Minor.' Origin as 26.11.

Yortan has yielded many collar-necked jars with feet, but they are less squat than ours.[2] Nor have the Trojan examples similar proportions;[3] perhaps the nearest counterpart is the pyxis, *Thermi*, pl. VIII, 114. A date in the first half of the third millennium seems appropriate.

Pl. 24*c*. Inv. 127. *Deep bowl with offset neck.* The lugs are unpierced. Hand-made, of gritty silver-grey clay with faint traces of polish; on the surface is an impressed pattern.

Ht., ·10 m. 'From Yortan.' Purchased in 1908.

This little vase might be called a collar-necked jar; indeed a jar of that form from Kusura is among its closest parallels.[4] The silver-grey clay, the decoration, and the general style are sufficiently reminiscent of the Kusura pots of period B to make me think that no. 127 may have been found in a neighbouring region. We do not know how far back in the third millennium the material from period B goes, but I suspect no. 127 of belonging to the middle centuries.

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[1] *Thermi* p. 84. The incised collar-necked jar found with two stirrup-vases in a grave near Malduvan must be a survival, or, since it is not hand-made, archaistic. It is published in *Jahreshefte* XV, Supplement, pp. 49, 50 and 53, fig. 46.

[2] *BM Cat.* I, 1, pl. II, upper half.

[3] Contrast *SS* 2242.

[4] *Archaeologia* LXXXVI, pl. VII, 14.

Pl. 24*d*. Inv. 26.8. *Deep bowl with lip, perhaps a crucible.* Wheel-made, of coarse grey clay. Outside are patches of a vitreous deposit and some slag; inside, the surface is rough with lumps of slag attached. Professor Wace, who had also noticed the slag, points out that the vessel is cracked, as though by strong heat.

Ht., ·085 m. From near Ephesus. Origin as 26.11.

The shape recalls that of certain Early Minoan vases,[1] though the fabric and function are different, and the date presumably rather later.

Pl. 23*a*. Inv. 26.10. *Trefoil-mouthed jug.* Wheel-made, of greyish buff clay, poorly levigated, unpolished, and very micaceous. There is a plastic band below the neck: the body is marked with impressed lines and zigzags.

Ht., ·177 m. 'Said to come from Yortan.' Origin as 26.11.

The grey wares of north-western Anatolia, starting in the bronze age and surviving into the iron age, include many trefoil-mouthed jugs and frequently display impressed zigzags as well as multiple wavy bands.[2] No. 26.10 is one of the less aristocratic members of this family, being much more carelessly made than the majority of its fellows. It is probably a work of the early iron age, and can hardly come from Yortan.

The vases described above, some of which are pleasing to look at, and nearly all of which are easy to place in their ethnological context, have been disillusioning in one respect: they are very hard to date accurately. They remind us how few sites in western Anatolia are sufficiently stratified to illustrate the sequence of styles, and to provide criteria for the dating of unstratified objects. Nor are we as yet certain about the chronology of the sites in question when they go back into the third millennium, though particulars concerning Troy I–IV may at any moment be available. The Trojan evidence will probably necessitate the modifying of the provisional scheme proposed for Thermi, and then the developments of the potter's craft in the north-western region will, we hope, be defined between proper limits.

But Anatolia is a vast country, and in the prehistoric period it was remarkably tenaceous of its traditions. The practices that died out in one district may have survived much longer in another, so that no chronological system can have a wide application. In the present state of our knowledge, it would seem that towns as far east as Kusura were more conservative than those nearer the west coast.

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[1] *E.g.* Bosanquet and Dawkins, *The Unpublished Objects from the Palaikastro Excavations*, Pl. II, d and p.8.

[2] *JHS* LII p. 5.

The moral of all this is that further excavation is urgently needed. In the meantime, I must briefly explain the considerations that have influenced me in dating the first six pots well before the end of the third millennium. By 2000 B.C. the fifth town of Troy had been established;[1] the 'B wares' of Kusura were being replaced by vases related to Hittite types;[2] Alişar in the east had for about three centuries abandoned the manufacture of those vases of the 'Alişar I' style which link that city in some measure to the west.[3] Our pots must have been made long before Troy V, and no. 127, which I have connected with the Kusura group, is not like the late elements of Kusura B—those which immediately preceded the transition to the period of Hittite influence. In short, the six vases in question came into use at a time when the western culture was still fairly homogeneous.

W. Lamb.

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[1] See *Thermi* p. 210; for the Helladic wares in Troy V, see *AJA* XLI p. 595.

[2] *Archaeologia* LXXXVI p. 4; LXXXVII pp. 229, 237.

[3] *OIP* XXX pp. 432–3.

Δίπαλτος.

πᾶς δὲ στρατὸς δίπαλτος ἄν
με χειρὶ φονεύοι
Soph. Aj. 407–8.

ὡς δ' εἴδομεν δίπαλτα πολεμίων ξίφη
Eur. I. in T. 323.

δίπαλτον ἱερὸν ἀνὰ μέσον πλατᾶν πέσοι
Αἰγαίου κεραυνοφαὲς πῦρ
Eur. Tr. 1103–4.

Δίπαλτος occurs in Attic tragedy in these three passages, and apparently nowhere else in Classical literature.[1]

On the passage in the *Ajax*, the earliest of the three, the Scholiast comments:—ἀμφοτέραις ταῖς χερσὶν οἷον περιδεξίως με φονεύοι· παντὶ σθένει ὡς Δίδυμος· ἢ ὁ στρατός με φονεύοι λαβὼν τὰ δίπαλτα δόρατα, ὡς Πῖός φησιν, information which Suidas repeats in a slightly abbreviated form without reference to authorities. That is, there were two lines of interpretation, one literal, ' with a spear in each hand ', as is plainly shewn by the reference to Φ 162–3 implied by περιδεξίως (περιδέξιος there can only be the equivalent of the metrically impossible ἀμφιδέξιος, a meaning recognised in *AP* xii. 247, an epigram with a Homeric flavouring) and one figurative ' with might and main ' (διπλῇ χειρὶ καὶ πάσῃ δυνάμει, as Schol. Tricl. puts it). The meaning attached by Pius to δίπαλτος escapes us, since he may equally well have meant ' spears brandished in each hand ' and ' spears brandished mightily ', (i.e. ἀμφοτέραις ταῖς χερσίν without the defining περιδεξίως) but his comment implies that the weapon was assumed to be the spear. This is what the verb πάλλειν would in the first instance suggest to a Greek, since where weapons are concerned Homer uses it exclusively of brandishing a spear or stone. Ajax might indeed forecast for himself the δημόλευστος φόνος already known to Homer (Γ 57) but his words by themselves could not possibly suggest it. Eustathius ad Il. H, p. 674, 13 appears to support the first solution, which is undoubtedly correct:—παλτὸν εἶδος ὅπλου, ἐξ οὗ παρὰ Σοφοκλεῖ δίπαλτος φονεύς.

Of modern editors, Musgrave follows Didymus without quoting him; Lobeck merely refers to Suidas, Eustathius and the scholia, and cites the opinions of Didymus and Pius with the cryptic comment ' Utinam de difficilioribus locis sententias illorum apposuissent'. Hermann gives the true explanation 'duas hastas vibrans', but unfortunately waters it down to 'bene armatus'. Campbell, characteristically laconic, says 'with spears in both hands; δύο δοῦρε παλλόμενοι' a tacit allusion to that Homeric practice in which the origin of Sophocles' phrase is undoubtedly to be sought. Two spears are a frequent though not an invariable part of the Homeric warrior's equipment, (cf. e.g., Γ 18, Κ 76, Λ 43, Ν 241) and two regularly appear on Dipylon vases in conjunction with both the round and the hour-glass shield.[1] That the round shield was probably (as in Homer) slung on a telamon and certainly wielded by a central hand-grip was first established by Helbig,[2] who was able to adduce abundant examples of the type from the Near East dating both to the Late Bronze and the Early Iron Age, and a scantier but not inconsiderable number from Greece, and argued convincingly that this is the round shield described or implied in a number of passages in Homer. The manner of handling it is indicated in Μ 294, when Sarpedon is about to go into action, αὐτίκα δ' ἀσπίδα μὲν πρόσθ' ἔσχετο πάντοσ' ἐΐσην 'brought his shield into the "front" position', and then let it hang by the telamon. Consequently he was able to brandish two spears, one in each hand as he advanced; τὴν ἄρ' ὅ γε πρόσθεν σχόμενος, δύο δοῦρε τινάσσων, βῆ ῥ' ἴμεν. The phrase πάλλων ὀξέε δοῦρε occurs several times in the Iliad.[3] A right-handed man fighting at long range would of course first throw with his right hand and then transfer the second spear to it. The ambidextrous Asteropaios (Φ 162–3) decided to use his equivocal advantage and confuse Achilles' defence by hurling his spears simultaneously; consequently he was left without resource when he failed to pull out of the earth the famous ἰθυπτίων with which Achilles had missed him. Achilles, armed in the Bronze Age manner,[4] had no second spear, but was quicker with the sword than Asteropaios. When in the 7th century the shield with a telamon and single central hand grip was superseded by the hoplite shield which had an arm-band as well as a hand-grip and no telamon, the use of two spears naturally became impossible, but the hearers or at any rate the readers of Sophocles knew their Iliad, and such of them as had met the host of Xerxes must have seen the single-grip shield handled by many of the contingents. They would not fail to interpret the poet aright. 'Brandishing a spear in either hand' is therefore the meaning of δίπαλτος in this passage, natural in itself and borne out by the somewhat analogous use of δι- in two other compounds. The first occurs in an Aristophanic parody of Euripidean lyric (*Ran.* 1361–2) διπύρους ἀνέχουσα λαμπάδας ὀξυτάτας χεροῖν; the Scholiast comments ὅτι λαμπάδας ἔχει δίσσας. The second is in an epigram possibly by Antipater (*AP* VII 711) on the death of a bride just before marriage:—Κηδέμονες δ᾽ ἤλποντο διωλένιον φλόγα πέυκας ἄψειν ἀμφοτέραις ἀνσχόμενοι παλάμαις. The use of δι- appears in fact to be distributive rather than copulative.[1]

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[1] It is used in the active sense in 1, in the passive in 2 and 3. The text in 3 is open to doubt, but the questions raised have nothing to do with the meaning of δίπαλτος.

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[1] Occasionally the number is three, e.g. on a large amphora in the British Museum. No. 1927, 4–11, 1.

[2] *Jahresheften des Oesterr. Institutes XII* (1909) pp. 1 ff.

[3] Ε 495, Ζ 104, Λ 212. In each case there is a variant ὀξέα δοῦρα, which would cover the occasional use of three spears. Γ 18–19 together with 20 were atheticised by Zenodotus, doubtless as conflicting with 338.

[4] Also the classical; the hoplite in the field could carry only a single spear (cf. Plat. Euthyd. 299 C).

Jebb in a somewhat confused note expressly rejects the derivation from Homer and ranges himself on the side of Didymus, but commits himself to the translation 'with sword uplifted in both hands', explaining that this means 'with utmost force' and that τριπάλτων πημάτων in *S.c.Th.* 985 shews that the word had passed into a figurative sense in which τρι- was merely equivalent to 'fiercely'. The Aeschylean passage is corrupt and some editors have abandoned the words altogether; but there is nothing in τριπάλτων itself to arouse suspicion. The intensive force of τρι- is too familiar to need illustration; but that it was ever transferred to δι- there is nothing to shew. Jebb quotes no parallel, but claims that this is also the meaning of δίπαλτα in *I. in T.*, in which he differs from other scholars and is certainly wrong. He was doubly unfortunate in that he found in the words a suggestion that in the *Ajax* also the weapon designated was the sword; for it is hardly necessary to state that the two-handed sword was unknown in the ancient world. For Hellenic Greece, whose practice alone is relevant here, the testimony of almost innumerable vase-paintings is by itself sufficient; and it is reinforced by that of a long series of swords *in corpore*, beginning in the Late Bronze and covering the Early Iron Age. It is strange that the great Hellenist, who understood better than many scholars of his generation the importance of archaeology in the study of Greek life and who did much to promote the foundation of the British School of Archaeology at Athens, should have neglected archaeological evidence thus ready to his hand. On the source of the romantic error it is idle to speculate.[2]

Our second passage needs no long discussion. There is no ancient scholion on it, and from Barnes onwards editors have for the most part interpreted it correctly. Weil and Paley, both of them sound scholars with a sensitive feeling for Greek, give renderings equivalent to ‘ the two swords brandished by our foes ’, Weil expressly repudiating ‘ les épées à deux tranchants ’ and ‘ les épées brandies avec les deux mains ’. Paley paraphrased by δύο παλλόμενα ξίφη, and farther, by a reference (without translation) to the *Ajax* and the *Troades* he shewed that he not only took the former passage in its true sense, but that he saw what other editors had failed to see, viz., that in the *Troades* δίπαλτον κεραυνόφαες πῦρ must be translated on the same lines.[1] The phrase is commonly taken to mean ‘ a thunder-bolt hurled by Zeus with both hands ’; but a two-handed thunder-bolt is, archaeologically speaking, as inadmissible in classical antiquity as a two-handed sword. The type of the Thunderer wielding his bolt in his raised right hand was early established and must have been familiar in every corner of the Greek world. The form of the thunder-bolt also, though admitting of much variety in its decorative detail, had long been fixed so far as the means of handling it were concerned. Generally it consisted of two sections, sometimes recognisable as bunches of flames, sometimes looking like mere stylised flowers or buds, but always placed butt to butt and united by a neat and serviceable handle, designed to admit the grasp of one hand only.[2] Thus Zeus wields it. Scores of vase-paintings, not to mention other works of art, represent him engaged in the Gigantomachy or peacefully grasping the emblem of his power, and their testimony is unanimous. In view of the evidence the current translation must be abandoned and the alternative to it, ‘ two thunder-bolts hurled by Zeus one with each hand ’, examined. The attitude of Zeus which it presumes is at first sight as inadmissible as a two-handed thunder-bolt; but in fact there is warrant for it and the possibility of the proposed translation was noted long ago. C. D. Beck in his edition of Euripides[3] incorporated without comment a note on this phrase from one ‘ Clar. Prévost ’ which runs as follows:—

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[1] To the classical examples of δίπαλτος may be added one from Theophylactus Bulgarus (Ep. 74, Migne, Patr. Gr. 126, p. 500) adduced by Blomfield on *S.c.Th.* 985. The learned archbishop in a letter to a friend expresses the hope that his correspondent's affairs are in better shape than his own; εἰ δὲ καὶ τὸ σὸν δυστυχῶ, δίπαλτος ἡμῖν ὁ πονηρὸς ἔπεισιν. The allusion to the passage in the *Ajax* is clear, and so is the general sense *duplice armatus*. Probably Theophylactus meant 'with a weapon in each hand'.

[2] Macaulay fell into it (more excusably) when, casting his ancient authorities aside and involving Horatius in a hand-to-hand encounter, he made Astur whirl up his broadsword with both hands to the height. In his case one is inclined to suspect unconscious derivation from the famous 27th chapter of the *Talisman*.

> ‘ On voit sur quelques médailles et pierres gravées un Jupiter foudroyant, tenant les mains élevées, toutes deux armées des carreaux célestes; les Pierres gravées du Cabinet du duc d’Orléans en offrent un exemple ’.[4]

It would be interesting to know what material Prévost had before him, for even on Oriental monuments the god of the storm seldom has a bolt in each hand. Both hands are armed, but one generally holds the lightning (or thunder-bolt variously stylised) and the other a mace, axe, spear, scimitar or curved stick, or even a sceptre. The list given by P. Jacobsthal (*Der Blitz*, p. 5, n. 2) of representations of the god holding two thunder-bolts includes only seven Oriental items and one Etruscan.[1] No actual Greek example is known; yet at some moment early in their history this form of the Thunderer captured the imagination of the Greek race. Two statues which embodied it, both at Olympia, are known to us by the record which Pausanias has left of them.[2] One, a dedication of the Arcadian community of Cynaetha, was probably inspired by the other, and has therefore little importance except as witnessing to the estimation in which its model was held. That other, which stood in the Bouleuterion, was the image of Zeus Horkios before which, ἐπὶ κάπρου τομίων, the prospective competitors together with their fathers, their brothers and their trainers swore μηδὲν ἐς τὸν Ὀλυμπίων ἀγῶνα ἔσεσθαι παρ' αὐτῶν κακούργημα. It is described by Pausanias in the following terms:—πάντων ὅποσ' ἀγάλματα Διὸς μάλιστα ἐς ἔκπληξιν ἀδίκων ἀνδρῶν πεποίηται . . . ἔχει δὲ ἐν ἑκατέρᾳ κεραυνὸν χειρί.

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[1] In vol. III of his Euripides, published in 1860. In his note on the passage in the *Troades* (vol. I, 1857) he does not comment on δίπαλτον, having probably been unable to make up his mind. For Weil’s note see his *Sept Tragédies d’Euripide*, *ad loc.*

[2] The few Greek thunder-bolts which consist of a single section are recorded by Jacobsthal, *Der Blitz in der orientalischen und griechischen Kunst* (1906), pp. 13 ff. They also are held by one hand only.

[3] Based on Barnes and Musgrave and produced, the earlier part in conjunction with Morus, 1778–88.

[4] P. 1080. I have not succeeded in identifying either Prévost or the engraved stone, presumably Oriental, which does not figure in the catalogue of the Orleans collection.

It would be strange if the appalling form of Zeus Horkios had left no trace in literature. It must have been known by autopsy to those hundreds or rather thousands of Greeks who gathered from every quarter of the Hellenic world to attend the festival at Olympia, and by repute to thousands more. The functions of a god expressly fashioned to strike terror into the wicked would not be limited to perjurers; the Trojan women might well invoke the doubly armed deity to sink the ship which carries Helen home, content themselves to perish in the same catastrophe. Euripides could trust readers, for whom alone the subtler allusions of a chorus were intended, to take his meaning.

If in this passage δίπαλτον means ' hurled with either hand '; it is worth while to examine another allusion to the thunder-bolt in Euripides. In the *Ion* the chorus, surveying the sculptures of the temple at Delphi, exclaim, ' τί γάρ; κεραυνὸν ἀμφίπυρον ὄβριμον ἐν Διὸς ἑκηβόλοισι χερσίν; ' (212–13).

The plural χερσίν indicates that here also Zeus is δίπαλτος and that the true meaning of ἀμφίπυρον is not the commonly accepted ' blazing at both ends ', (though this is the classic form of the Greek thunder-bolt), but ' blazing in either hand of Zeus '. This interpretation is supported by the use of the epithet in 716 of the same play (Βάκχιος ἀμφιπύρους ἀνέχων πεύκας) and by Sophocles as an epithet of Artemis (*Tr.* 213) ' with a torch in each hand ', where the meaning is indisputable. Euripides may have wished to suggest to his audience a temple more ancient than the familiar structure of the Alkmaionidai.[1]

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[1] To these may be added a cylinder seal in the British Museum (89521) and a fine stele found by Thureau-Dangin in the recent excavations at Arslan Tash, *v. infr.* figs. 4 and 8.

[2] Paus. V. 24.9, VIII. 19.1, cited by Jacobsthal, *l.c.*

Whether Euripides ever visited Olympia is unknown, but that Pindar was familiar with its sights cannot be doubted. It is not fanciful to detect the image of Zeus δίπαλτος, if we may so call him, in the lines which tell of the ends, strictly simultaneous, of Asklepios and his resuscitated patient:—

> . . . . . . χερσὶ δ᾽ ἄρα
> Κρονίων ῥί-
> ψαις δἰ ἀμφοῖν ἀμπνοὰν στέρνων κάθελεν
> ὠκέως, αἴθων δὲ κεραυνὸς ἐνέσκιμψεν μόρον

(*Pyth.* III, 100).[2]

The type which imposed itself at a great centre of Hellenic life, though it proved to be ephemeral in Greek art, cannot have been a mere isolated freak, and to seek for traces of it in early literature is not unreasonable. References to it in Pindar and Euripides must be based on their knowledge of the Olympian image alone, but if earlier examples are discoverable, they may have been suggested by a new and striking form appearing on specimens of Oriental metal-work and above all of textiles which, sometimes perhaps directly, more often by way of Cyprus and Crete, were finding their way into Greek markets. One such may have inspired the passage in the Iliad (Λ 183–4) where Zeus seats himself on Ida, ἔχε δ᾽ ἀστεροπὴν μετὰ χερσίν. The line may have hovered in the consciousness of Euripides, for it is the Idaean Zeus whom the Trojan women invoke.

The picture of Zeus in the *Theogony* is somewhat blurred and shifting. In the battle with the Titans (690–2) he seems to assume the attitude which soon became canonical in Greek art, with only the right hand armed; lightning, thunder and thunder-bolts fly χειρὸς ἀπὸ στιβαρῆς. Here the weapons are three; they had been conferred on him by the Cyclopes, grateful for their deliverance (504–6). Elsewhere they are only two:—βροντή and κεραυνός as the basis of his power (72–3), βροντή and στεροπή carried for him by Pegasus (286). In his encounter with Typhon (844–56) he employs all three, thunder and lightning against Typhon's fire, the thunder-bolt against his πρηστῆρες ἄνεμοι; the order is chiastic. It would seem that Zeus had both hands full, but there is no indication that he held twin thunder-bolts. Vase-painting offers no visual symbol for βροντή and στεροπή, ordinary phenomena of the sky, alarming, but generally harmless. The κεραυνός is the bolt that strikes to slay or consume; the ground on which it alights becomes an ἠλύσιον, τὰ δὲ τοιαῦτά ἐστιν ἄβατά.[1] It is something less evanescent than lightning; behind it lurks the tradition of meteorites, such as that παμμεγέθης λίθος whose fall heralded the battle of Aigos Potamoi, and which was still revered and exhibited in Plutarch's day, or at least in that of his source, by the inhabitants of the Chersonese.[2]

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[1] The other examples of ἀμφίπυρος in Euripides (*Hipp.* 559, *Hec.* 473) are unrevealing, and the more obvious meaning preferable. Soph. *Aj.* 1405 affords the only other example of the adjective in tragedy; its meaning there is unmistakably 'with fire blazing all round'.

[2] Though Pindar is generally regarded as the first to include the patient in the judgment, the logical necessity of providing for his case must have been apparent from the first. The commentators go too far when they say that Pindar departed from an older tradition vouched for by a Hesiodic fragment (Rzach^3 125, 3) which mentions only Asklepios. The passage is quoted by Athenagoras (πρεσβ. 29) as giving an example of an unsatisfactory character whom the pagans credited with divinity, and naturally breaks off as soon as Asklepios is disposed of. Zeus δίπαλτος may belong to the original tradition.

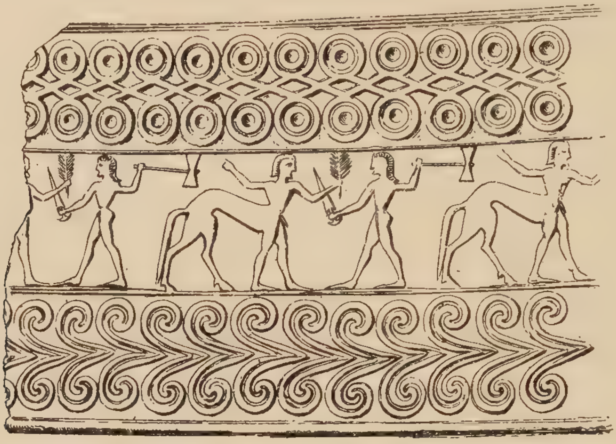

Fig. 1.—Rhodian Sherd.
(From Cook, *Zeus*, II, fig. 514, by courtesy of the Cambridge University Press.)

In the classic age the thunder-bolt was the sole weapon of Zeus, but in the very earliest representations of his combats with monsters, he carries other or supplementary arms. On a number of reliefs on stamped pithoi from Rhodes and Caria which date to about the first quarter of the 7th century he appears in conflict with a monster compounded of horse and man whose identity does not concern us here; it may for convenience be called a centaur, though it is not the centaur of Greek myth. On one sherd he threatens his opponent with a double axe only;[3] on others he has in addition a sword and is perhaps thus entitled to be called δίπαλτος (Fig. 1).[4] It is true that he is but imperfectly Hellenised; his weapons are those of Zeus

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[1] See Hesych., Suid., Et. Mag. s.v. ἠλύσιον.

[2] *Vit. Lys.* xii; cf. Usener, *Götternamen*, p. 287.

[3] *AM* XXI (1896) p. 230, fig. 1 (= P.V.C. Baur, *Centaurs in Ancient Art*, p. 85, fig. 17 and A. B. Cook, *Zeus* II, p. 615, fig. 513). Salzmann, *Nécropole de Camiros*, pl. XXVI*a* (= Cook *op. cit.* p. 614, fig. 512.)

[4] *AM* l.c. pl. VI (= Baur, *op. cit.* pl. XI and Cook *op. cit.* p. 616, fig. 514).

Labraundeus, established no great way off in his Carian sanctuary near Mylasa, who held the double axe in one hand [1] and was girt with a sword.[2] So far our literary authorities; but the other hand cannot have been empty. That it held a spear is proved by representations of Zeus Labraundeus on a fourth century relief found at Tegea,[3] on a series of Hecatomnid coins of the same century and on coins of Mylasa of the Imperial age.[4]

The Carian Zeus was in fact hardly distinguishable from the weather god, Teshub-Hadad, who is believed to be of Hurrite origin, but appears in Anatolia and Syria at an early date. In place of the spear, however, Teshub normally carries the lightning or thunder-bolt, and the blade of his axe is single, though it has a well-developed butt behind the helve. In Greece the spear was exchanged for the sceptre, symbol of a sovereignty no longer contested, and the thunder-bolt, once the Gigantomachy is safely over, becomes the instrument of judgment, not of battle. The sword normally carried by the Oriental deity makes, however, one unmistakable appearance in the possession of Zeus on a purely Greek monument, a proto-Corinthian aryballos (Fig. 2)[5] dating to the first quarter of the 7th century and thus contemporary with the sherds of the Rhodian and Carian pithoi. Here also Zeus advances upon a horse-bodied opponent poising in one hand the thunder-bolt, which puts his identity beyond doubt; he appears to dispute with his adversary the possession of a sceptre which both clutch. By his

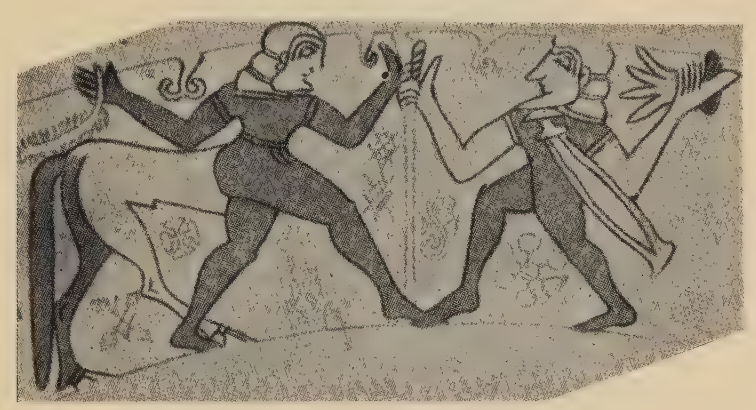

FIG. 2.—DETAIL OF PROTO-CORINTHIAN ARYBALLOS.
(After *AJA*, 1934, p. 128.)

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[1] Plutarch, Qu. Gr. 45, pp. 301–2.

[2] Aelian, *de An. Nat.* XII, 30.

[3] Now in the British Museum.

[4] *JHS* XXXVI (1916) p. 65, figs. 1 and 2, Cook, *op. cit.* pp. 592 ff. and 705.

[5] Johansen, *Vases Sicyoniens*, pl. xxii, 2 a-d and p. 146, fig. 109; Payne, *Protokorinthische Vasenmalerei*, pl. xi; Buschor, *AJA* 1934, p. 128, fig. 1.

side, plainly visible through the scabbard, hangs the heavy one-edged blade with slightly curved back, known as the kopis and associated with the East both in fact and fable. There is therefore a period in which the one deity of the Greek pantheon who has an incontestably Indo-European name took over attributes from deities with similar functions in the Near East. This is only natural; for while Greek religion was passing from an apparently aniconic stage in the proto-Geometric period to the anthropomorphism of the classic age, the Greeks had only oriental models before them. Even that which was for long the god's distinguishing attribute was of Oriental

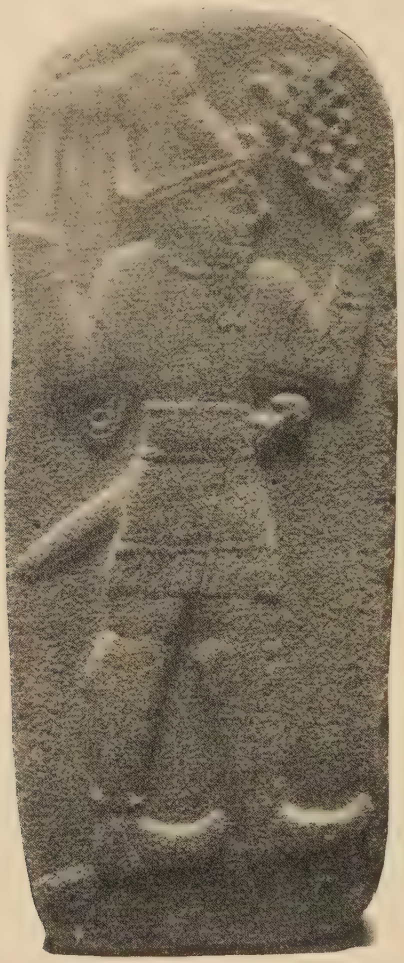

Fig. 3.—Syro-Hittite Stele.
(From *Greek Poetry and Life*, pl. I, by courtesy of the Clarendon Press.)

origin, for, though from the first they stylised it in their own manner, the Greeks borrowed the form of the thunder-bolt from the East. There is therefore a certain presumption that they also borrowed the form of Zeus Horkios; if it had been of their own devising, they would have been less likely to discard it so soon. If it was borrowed, the original must be sought in the Phoenicia, Syria or Assyria of the appropriate period. Teshub-Hadad is in a sense δίπαλτος since he carries a weapon in each hand, an axe, generally speaking, in the right and in the left a bunch of lines, usually wavy, which symbolise the lightning. Typical examples of this deity are to be found on Syro-Hittite stelae (Fig. 3);[1] his statue in similar guise is represented on an Assyrian relief[2] dating to the reign of Tiglath-Pileser III (745–727), carried in procession with those of other deities. This type may have sug-

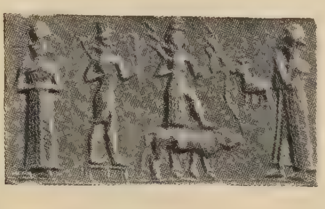

FIG. 4.—BABYLONIAN SEAL IN THE BRITISH MUSEUM.
(By permission of the Trustees of the British Museum.)

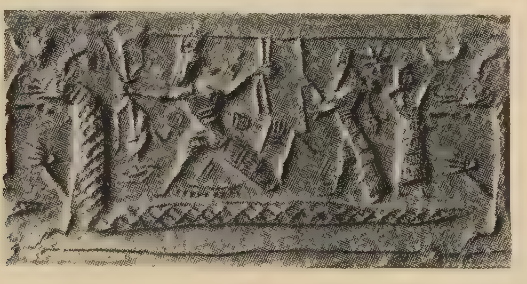

FIG. 5.—BABYLONIAN SEAL IN THE BRITISH MUSEUM.
(By permission of the Trustees of the British Museum.)

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[1] (a). *Wiss. Veröff. D.O.G.I.* pl. I; E. Meyer, *Reich u. Kultur der Chetiter*, p. 57, fig. 56; A. Götze, *Hethiter, Churriter u. Assyrer*, pl. 34. Found in Babylon, but certainly brought there from a Syro-Hittite site. (b). *Ausgrabungen in Sendschirli* pl. XLI; Meyer, *op. cit.* p. 57, fig. 57. From Sinjerli. (c). Meyer *op. cit.* p. 103, fig. 80. From Malatia; in this case the axe is replaced by a bow. These monuments are not precisely datable, but cannot well be earlier than the 9th and are certainly not later than the 7th century.

[2] Removed by Esar-haddon to the S.W. palace at Nimrud. Layard, *Mon. of Nineveh*, I. pl. 65; *Nineveh and its Remains* II, pp. 34 and 451; *Assyrian Sculpture in the British Museum* II, pl. X.

gested to the Greeks the Zeus of the *Theogony*, armed with thunder and lightning or thunder and thunder-bolt. That the bunch of rippled lines typifies the swift, blinding scribble of lightning is generally accepted; the axe probably indicates the power to smite and shatter, perhaps also the celestial crashes which accompany the havoc. The god with a pair of thunder-bolts, however, has not so far occurred on Syro-Hittite monuments.

In Babylonian and Assyrian art deities so equipped are forthcoming; moreover, in these regions the type is very ancient. It occurs on an Akkadian cylinder seal on which a nude goddess, erect on the fire-breathing dragon which draws the chariot of the Akkadian weather-god, holds in each hand a bunch of wavy lines.[1] On a seal of the First Babylonian dynasty (Fig. 4)[2] the weather-god appears, erect and striding on the back of a bull. We may call him Hadad, for Assyrian influence is marked. On a seal dating probably to *c.* 1200 Marduk assails the dragon Tiamat with a pair of thunder-bolts (Fig. 5).[3]

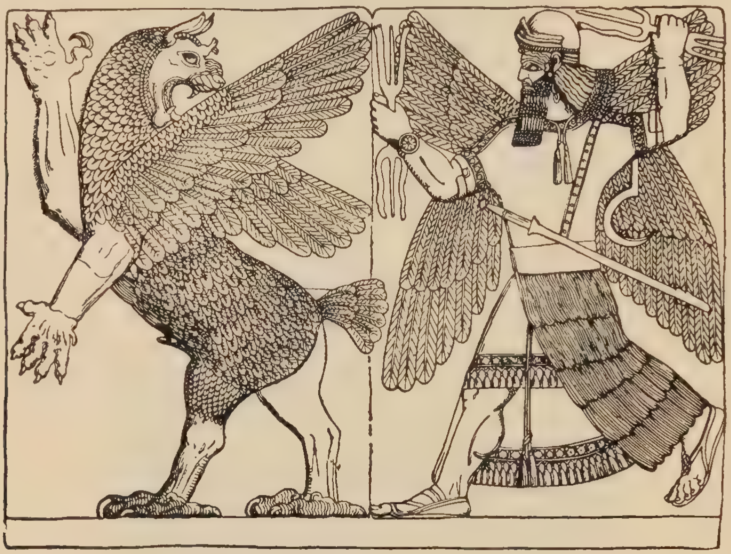

Fig. 6.—Relief from the Temple of Ninib at Calah (Nimrud).
(From Contenau, *Civilisation d'Assur et de Babylone*, p. 115.)

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[1] Ward, *Cylinder Seals of Western Asia*, p. 49, fig. 127; Contenau, *La Glyptique Syro-Hittite*, pl. I. 3. She holds the lines by the middle, so that they have the appearance of a double thunder-bolt, a form which we shall meet again on Babylonian and Assyrian monuments. The Syro-Hittite god holds his lightning by one end, as in archaic Greek art Zeus sometimes holds the thunder-bolt.

[2] In the British Museum; the date is probably c. 1800. Ward, *op. cit.* p. 171, fig. 456; cf. H. Frankfort, *Cylinder Seals*, pp. 162–3.

[3] In the British Museum. Ward, *op. cit.* p. 201, fig. 579.

In the period relevant to this inquiry we have on a relief from the temple of Ninib at Calah (Nimrud) a winged deity with twin thunder-bolts, one in each hand, driving a monster before him (Fig. 6).[1] The relief belongs to the reign of Assur-nasir-pal II (885–860). On a relief found at Babylon a king, Shamash-resh-usur, appears before two deities, Ishtar and Hadad.[2] The latter stands in a peaceful attitude, holding before him a thunder-bolt in each hand. Near the same spot was found a votive dedicated by Esar-Haddon (681–668) consisting of a small bar of lapis lazuli on which is carved the same deity with a thunder-bolt in each hand, the right raised in menace (Fig. 7).[3] Yet another example is furnished by a Sargonid gem in the de Clercq collection.[4] To the above examples can now be added a remark-

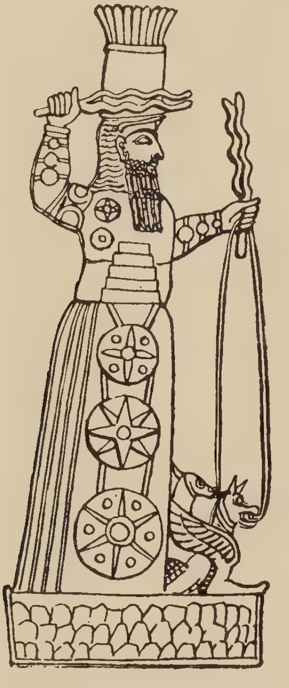

Fig. 7.—Votive Plaque of Lapis Lazuli from Babylon.
(From Contenau, *Manuel d'Archéologie Orientale*, p. 228.)

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[1] Layard, *Mon. of Nineveh* II. pl. 5, Contenau, *Civilisation d'Assur et de Babylone*, p. 105, fig. 19. Owing to the damaged surface the design does not shew up well in the collotype of *Assyrian Sculptures in the British Museum ; Reign of Assur-nasir-pal*, pl. XXXVII.

[2] Weissbach, *Babylonische Miscellen*, frontispiece. The king's reign cannot be precisely dated, but apparently falls somewhere between 900 and 600.

[3] Weissbach, *op. cit.* p. 17, fig. 2; Contenau, *Manuel d'Archéologie Orientale*, p. 228, fig. 139.

[4] Jacobsthal, *op. cit.* p. 5, n. 2.

able stele found by the French at Arslan Tash (Fig. 8),[1] an Assyrian outpost situated about 30 kilometres east of the Euphrates, on the route which by way of Guzana (Tell Halaf) and Til-Barsib gave to Assyria, independently of the good-will of the Hittite city of Carchemish, means of access to Syria and so directly or indirectly to the coast. The place was fortified by Tiglath-Pileser III and the stele was found in the precincts of a temple of contemporary date. On it is represented the god Hadad, erect on the back of a bull in a vigorously striding attitude. He grasps a double, three-branched thunder-bolt in each hand, one extended before him, the other raised to hurl the missile. Over his shoulders appear the ends of a bow and quiver, and he is girt with a sword which swings out behind. The fierce and menacing energy of his attitude contrasts strongly with the tranquil pose of the Babylonian figures and makes the monster-slaying deity of Calah seem tame.

Here if anywhere a type is exemplified which may well have given rise to that of Zeus Horkios. The period is suitable. By the end of the 8th century two motives current in Assyrian art, the winged horse and the horse-demon or centaur, had found their way to Greece.[2] About 650 B.C. several Assyrian motives appear in Early Corinthian vase-painting super-

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[1] Thureau-Dangin, *Arslan Tash,* pl. II. 1, p. 65.

[2] The following are examples of the winged horse in Assyrian art:—Layard, *Mon. of Nineveh* I, pl. 44, 1; beardless winged figure wearing horned cap holds by their manes two winged and rearing horses; pl. 50, winged horses rearing on either side of a sacred tree. Both occur on reliefs from the N.W. palace of Assur-nasir-pal II at Nimrud and form part of the embroideries of robes, royal and divine. Textiles with woven or embroidered designs probably played a large part in bringing Oriental motives to Greece. The winged horse is a fairly common motive on seals; see, e.g., Ward, *op. cit.*, p. 201, fig. 580, Weber, *Altorientalische Siegelbilder*, pp. 24 and 93, figs. 48 and 343 (= Malten, *Bellerophontes*, Jb. XL (1925), p. 148, figs. 54 and 55). The centaur, winged and bending a bow, appears on seals from the Kassite period onwards; see Ward, *op. cit.*, p. 4, fig. 21 (on which the wing is small and rudimentary) p. 209, fig. 629, p. 210, figs. 631 and 632, and cf. H. Frankfort, *Cylinder Seals*, p. 156. Neither motive belongs to Phoenician or Syro-Hittite art, though Malten is able to adduce a single example of a winged horse from a Hittite seal *op. cit.* p. 143, fig. 40; Delaporte, *Catalogue des Cylindres Orientaux dans la Bibliothèque Nationale*, pl. XXXVIII, nr. 650.

In Greek art a pair of winged, horse-bodied, horse-legged monsters with human head, bust and arms appears on a Late Geometric bowl *AM* XVIII (Attic), p. 113, fig. 10 (= Perrot et Chipiez VII p. 222, fig. 96, and *Kunst in Bildern*, p. 112, 9). Centaurs of normal archaic form appear on a Late Geometric vase (Attic) in Copenhagen (CVA Danemark, Fasc. 2, pl. 73, 3; cf. Johansen, *Vases Sicyoniens*, p. 146, fig. 110), and a winged Centaur, much like the Demons of the Attic bowl, follows a normal one on a Rhodian sherd of the 7th century; (Salzmann, *Nécropole de Cameiros*, pl. XXXIX). The New York bronze representing a man and a centaur belongs to the Geometric Age (Richter *The Sculpture and Sculptors of the Greeks*, p. 337, *AM* 1930 Beil. 38. 1). The winged horse appears on a couple of Phaleron jugs dating to *c.* 700; one, unpublished, is in the British Museum, the other is reproduced *Jb.* II (1887) p. 46, fig. 4 (= Malten, *op. cit.*, p. 146, Fig. 47).

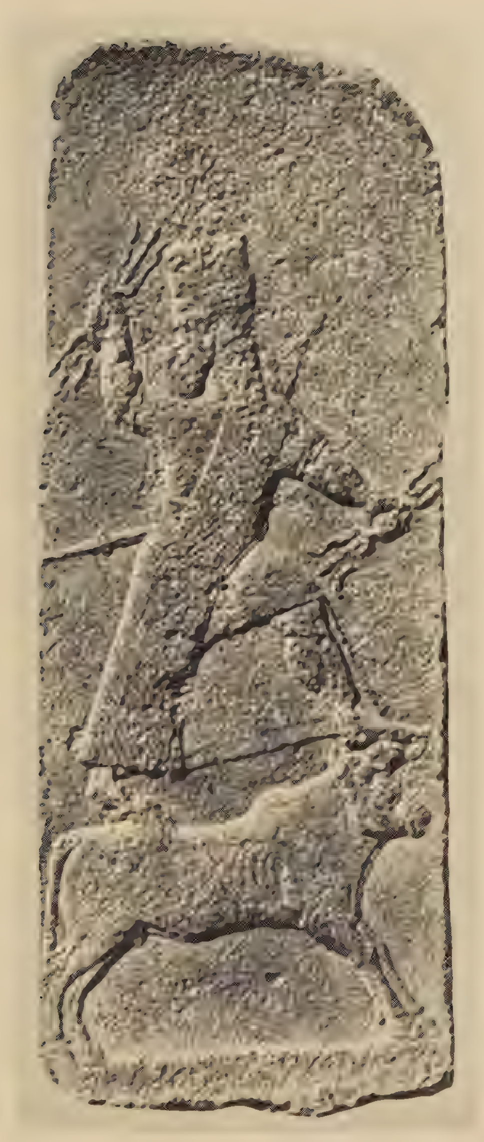

Fig. 8.—Stele from Arslan Tash.
(From Thureau-Dangin, *Arslan Tash*, pl. II, 1)

seding Syro-Hittite forms characteristic of proto-Corinthian ware,[1] a fact which points to the intensification of Assyrian influence about that date. Among these motives the double thunder-bolt must be included The same influence manifests itself in the early metal work of Crete,[2] in a period whose duration is not yet strictly defined, but whose lower limit probably falls *c.* 650.[3] That Crete played an important rôle as intermediary between Greece and the East is certain. The type of the god with two thunder-bolts may therefore have reached Greece at any time after *c.* 725.

It is unfortunate that, apart from the peculiarity of the two thunder-bolts, Pausanias tells us nothing of the statue of Zeus Horkios; size, material and pose are alike unknown, and we are consequently without any evidence whereby to determine its date. That unless it had μέγεθός τι it would hardly have impressed a traveller of the Imperial age as terror-striking is a legitimate conclusion; but if it was a columnar figure, like the undoubtedly ancient image of the Amyclaean Apollo, it might be very large and yet early. That so exotic a type would not have been admitted to the pan-Hellenic sanctuary and to so important a function in it after 600 seems certain; probably the date might be put a good deal higher. One within the first three quarters of the 7th century may be reasonably conjectured.

H. L. LORIMER.

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[1] This was the brilliant discovery of the late Humfry Payne, *Necrocorinthia*, pp. 67 ff.

[2] E. Kunze, *Kretische Bronzereliefs*, pp. 236 ff.

[3] *JHS* LIII (1933) p. 122.

Σιγύνη

In the old Lacedaemonian district of Amyclae, where a series of distinctly pre-Hellenic cults was preserved down to historic times, one of the richest Mycenaean tholos tombs, that of Vaphio, was discovered fifty years ago.[1] Some of the objects found in this tomb shew clearly oriental connections, while others, among which are the two famous gold goblets, are of pure Minoan origin.[2]

Though the tomb was not plundered, some of the objects contained in it were scattered about. The fragments of an inlaid dagger, decorated with a representation of swimming men, have been tentatively reconstructed by me.[3] Another weapon from the same tomb is discussed on p. 190.

Among the finds is a bronze tubular object, which is almost intact, though part of one end is damaged (Figs. 1–2). In any case the object is preserved in its entire length, which measures 0·76 m. The diameter, slightly increasing towards the top, is 0·027 m. at one end and 0·030 at the other. The thickness of the bronze plate of the tube is only about 0·7 of a millimeter. The smaller end is finished by an oxidised substance, which no doubt was a bronze disc, while the bigger end is open, and a piece of wood is still there, which proves that the interior of the bronze tube once had a wooden core, projecting from the open part of the tube (Figs. 1–2).

A bronze rivet, which goes diametrically from surface to surface of the tube, is still preserved to a distance of 0·025 m. from the open end (see Figs. 1–2). Another similar rivet is preserved near the upper closed end of the tube. This fact proves that the bronze plating was meant to be firmly fastened to the wooden core.[4] A series of shorter rivets (see Figs. 1–2) at regular distances served to fasten the edges of the bronze plate folded around the wood. The whole surface of the tube is marked regularly by ring-shaped bosses, a fact which gives the object a wavy appearance.

Its use was obscure. In the original publication it was characterised by the discoverer as 'ἴσως τὸ ἕτερον ἄκρον δόρατος,' where in later times the σαυρωτὴρ was applied. This is, of course, impossible. The

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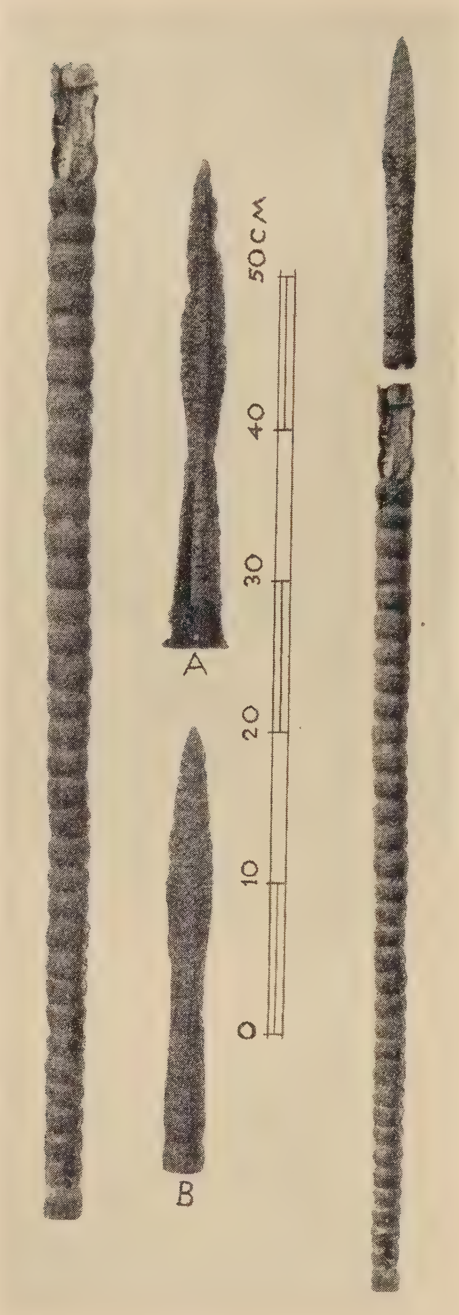
[1] Tsuntas, Ἀρχαιολ. Ἐφημερίς 1889, pp. 130 *sqq*. For the pre-Hellenic and presumably Minoan cults of Amyclae see M. Nilsson, *Minoan-Mycenaean Religion* etc. 403 and 485 and ed. Meyer, *Geschichte des Altertums*, 2, 1 (2nd edition, 1928) p. 253.

[2] For this fact see my two papers: 'Religionsgeschichtliche Fragen zu Funden aus Vaphio und Knossos,' *Arch. Anzeiger* 1929, pp. 166–70 and 'Kreta, und die hethitische-kleinasiatische Welt im 2. Jahrtausend' (*II türkischer Geschichtskongress*, 1937) p. 11 (of the off-print).

[3] *Essays in Aegean Archaeology presented to Sir Arthur Evans* pp. 63 *sqq*. and cf. Evans *Palace of Minos* etc. III pp. 127 *sqq*.

[4] Cf. also Tsuntas p. 158.


A
B
50CM
40
30
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10
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FIG. 1.

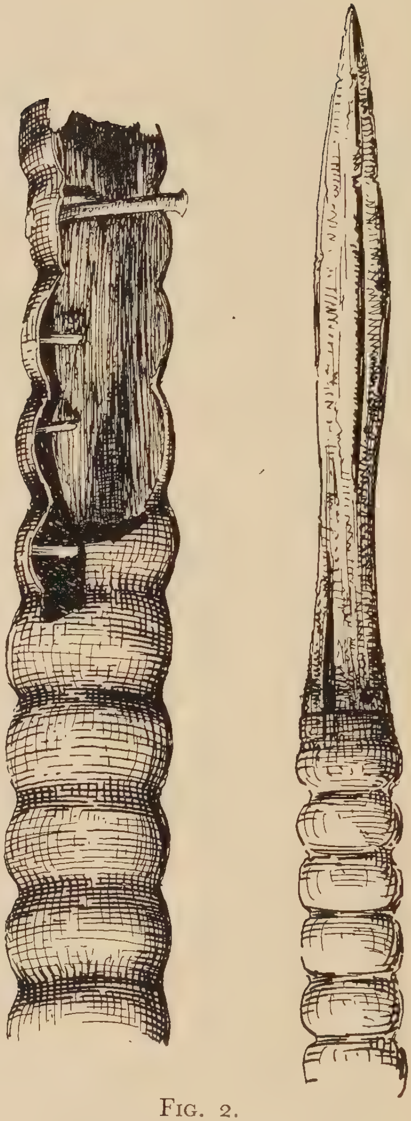

FIG. 2.

finder, the late Professor Tsuntas, explained it later in his lectures as possibly a sceptre, an idea which is repeated by Stais in his catalogue of the Mycenaean Room of the National Museum at Athens.[1]

In the same tomb two spear-heads were found (Fig. 1, A–B). The first is bigger than the other (length 0·327 m.). Its tube (αὐλός), which bears a ring at the lower end, is wider at the base of the shaft. This fact means that a big wooden shaft once entered this hole. It was a long and big spear, a βριθύ, μέγα, στιβαρὸν ἔγχος, according to Homeric terminology.

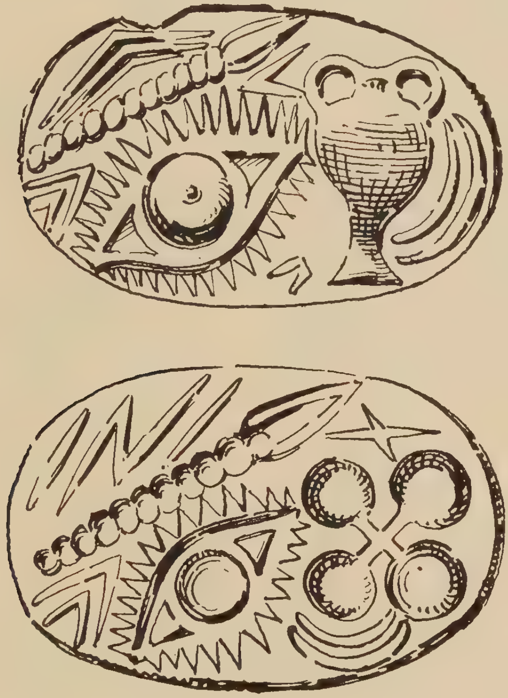

Fig. 3.

The other spear is shorter (length 0·285 m.) and smaller and of slightly different type. A double rivet hole exists in the tube, as in the previous example, but no ring is here at the lower end. The diameter of the tube, including the thickness of the edges, is only 0·022.

Both types of spear are of Cretan origin. Similar examples exist in the Museum of Heracleion from different parts of Crete.[2] As far as our case is concerned, there can be no doubt that the shorter of the two spears belongs to the tubular shaft already described. It was fastened to the wooden core, which once projected out of the bronze tube. This tube, however, covered the lower end of the spear almost exactly 1 centimetre. The traces of this covering are still perceptible upon the lower end of the spear, the diameter of which corresponds to the inner diameter of the tubular shaft. Thus in the tomb of Vaphio were deposited a great δόρυ, of which the entire wooden shaft has perished, and a little ἀκόντιον, which is wholly preserved, and is unique among the finds of the Creto-Mycenaean civilisation.

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[1] Stais *Collection Mycénienne* p. 156 no. 1867.

[2] See, for instance, Museum Catalogue no. 1246 from Hagia Triada (case 40). Sir Arthur Evans has treated the spear types in his *Shaft Graves and Beehive Tombs of Mycenae* (1929) p. 37 *sqq.* figs. 27–9.

That the javelin is of true Cretan origin is assured. Indeed, among the representations of Cretan gems we see more than once an almost exactly similar javelin. I give here designs of two such gems (Fig. 3), where the javelin has an hieroglyphic value.[1] Though the spear-head is slightly different in form from that of Vaphio, the identity of the represented objects with that reconstructed from the Vaphio tomb is striking. Remarkable is the increasing of the diameter of the shaft towards the spear-head in the representations, which is the case also in the real examples from Vaphio.

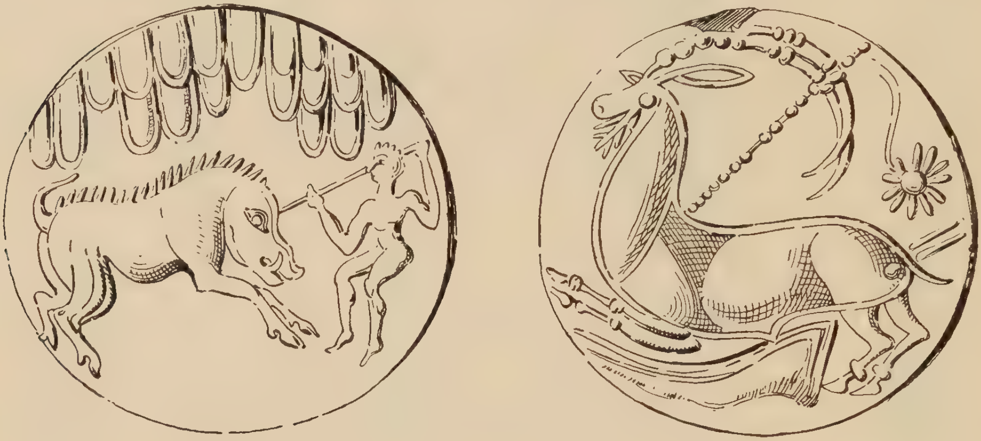

Fig. 4.

The reconstructed javelin measures 1·035 m. in length. It is a short weapon, such as we see in the gem representations. It was an ἀκόντιον, perhaps not very much used in war, where they were employed δύο δοῦρε, but destined especially for hunting and meant to be carried in the hand. To travellers, it was useful in repelling dogs.[2]

That the weapon was employed in hunting not only to thrust, but also to hurl, we know, both from literary sources and from representations such as the two shewn here (Fig. 4).[1]

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[1] See Evans *Scripta Minoa* p. 158, under no. P. 47.

[2] Odys. ξ 531, φ 340.

Of course it was not necessary for every javelin to have a bronze plating over its wooden shaft. The Vaphio example was surely an ‘ arme de luxe ’ in the hands of a royal person. It may be additionally remarked that the bronze plating in such a small weapon gave it the necessary weight to be more effective when thrown from a certain distance.

Not only is the origin of this weapon, to which may be aptly applied the Homeric expression παγχάλκεον (used, however, for other weapons, not for spears), Cretan, but possibly its special name may be too. We know that for such spears a γλῶσσα—*i.e.*, a rare expression—was employed: Σιγύνη (there exist other dialect variations, such as σιβύνη, σίγυνον and still more). We know, too, that this word, which was rare in Greece, was the common expression for a spear in Cyprus, where the survival of Minoan and Mycenaean civilisation is well known.[2]

That this word is not Greek, there can be no reasonable doubt,[3] though its origin remains a problem. The opinion may be ventured, at least as a possibility, that it was a Minoan expression. As in so many other cases, this word, together with the object it designated, wandered on the one hand into Greece, where it remained as a γλῶσσα, and on the other hand to Cyprus, either directly or by way of the Mycenaeans, where it became the main word for a spear.

Sp. MARINATOS.

Athens, June 1939.

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[1] The first is a gem from the Vaphio tomb. The second is reproduced from Evans *Palace of Minos* etc. IV p. 542 fig. 496.

[2] Cf. Herodot. V, 9: Σἰγύννας δ’ὦν καλέουσι Λίγυες . . . Κύπριοι δὲ τὰ δόρατα. Arist. *Poet.* 21, 6: τὸ γὰρ σίγυνον Κυπρίοις μὲν κύριον (*i.e.*, common word) ἡμῖν δὲ γλῶττα (*i.e.*, rare word). This expression designated especially ‘ hunting spear and generally spear ’ (Liddell and Scott, *A Greek-English Lexicon*, *s.v.*). Hesych. gives the meaning καπροβόλον, boar-hunting spear. Another instance which proves that the weapon was of small dimensions is the statement by Diod. 18, 27, that the funeral car of Alexander the Great had, among other decorations, lion-protomes bearing sibynae in their teeth (προτομὰς λεόντων σιβύνην ὀδὰξ κατεχούσας).

[3] Cf. Leo Meyer, *Handbuch der griechischen Etymologie* IV p. 21: ‘ Ohne Zweifel ungriechisch.’

J. L. M.

WONDERING what I could offer to J. L. M. I began to think about the very letters J. L. M.; perhaps I might have something to say about them. Saint Paul would not have the hardihood to call them φαῦλα καὶ πτωχὰ στοιχεῖα seeing that they stand for the most forcible personality of our generation in our study of the ancient world.

How did **J** get its tail? and that phonetic difference from **I** into which Romance speech has brought such confusion that for every language one must learn separately what value to give it? Once the practical Greek had substituted for the Semitic picture of a hand with its value *yod* a simple stroke denoting a vowel, all would seem straightforward.

But Latin wanted both vowel and consonant, yet had not the wit to distinguish them. When it did make a tall **I** and a low one it was to mark the long vowel as against the short. Later, in its cursive scripts it used tall **I** and low **i**, but mostly in order that tall **I** might stick up among lowly letters like **m** and **n** and **u**, though some people were so foolish as to write **Ille** and lose this advantage. All tall **I** did was to bring confusion and mistakes between *e.g.*, **eIectus** and **electus**.

The most obvious ‘ lower case ’ **j** is the one which appears about the twelfth century, when they begin to write **ij** for **ii** at the end of a word, or in a number like **vij**: and the dots come in about the same time. But this could never have acquired the special phonetic use and cannot be the real origin of **J** in our sense. I think we must seek it in the growth of a capital **J** side by side with **I** among the versals beginning paragraphs in Carolingian MSS. These of course must begin a line and be next the inviting blank space of the left-hand margin, and, sure enough, a ‘ process ’ growing down to the left of an **I** begins to appear. Now the scribe liked to have two varieties of each versal and to use them alternately: they were generally furnished by the Rustic and Uncial forms of each letter, D and ꝺ, E and ϵ and so on. When the Uncial was the same as the Rustic, as in the case of N, he might promote a cursive form to be a versal and make n. So he welcomed his tailed **I** and it grew into a bold letter **J** fitting well into his margin and recognised as an alternative form.

When Rustic V and uncial-cursive **u** came to be used first as initial and medial forms, and afterwards as consonant and vowel, **j** and **i** followed their example, and so we get our **j**, but whether to pronounce it *y* or *ž* or *dz* or *kh* must be learnt in every case. In this case it is *dž*, ‘ His name is John.’

The letter on Pl. 25 from the Twelfth Century Bury Gospels at Pembroke College, Cambridge (MS. 120), is an I not a J, but the lowest figure bears the suitable text ‘ Fuit homo missus a Deo cui nomen Iohannes.’

L, *lamed*, the ox goad, is the proper middle letter for a stimulating mind: it is the most indestructible of letters, going right back to Sinai, always unmistakable except in Greek minuscule, and, as it seemed, victorious over tall **I**: it is the only letter in Arabic and in Kök Turki, most remote of alphabets, wherein one can see an obvious resemblance to our Latin form. Even when the tidy humanist printers robbed it of its bottom hook it did not quite resemble I: it has been reserved for our new and superior sans-serif founts to produce III which one can equally ill read *Ill* or *three*. There is no mistaking this L from the same MS. Note on the splendid beast the hip-curl which goes back through Teutonic, Scythic and Iranian art to the creatures of Mesopotamia.

M naturally interests me for myself. The oldest M, on Ahiram’s coffin, being vertical, seems to be ‘ water poured forth,’ but the horizontal wave becomes the regular form. In Latin five strokes came down to four, and the four of the Capitals and the Pompeii cursive became three, thus giving rise to the Uncial ⲙ, to my mind the most beautiful of letters with its balance better than rigid symmetry, though later it became exactly symmetrical. I thought I remembered a very interesting one from the same MS., but it turned out to be a Q, so I give both. The M is full of Oriental creatures, four of them and two heads. The Q (may it stand for *Quaesitor* = *Forscher*?) shews the winged beasts affronted on each side of the sacred tree. Could Baltrušaitis adduce a better example for this *Sumérien–Roman* thesis? Here we see the northern love of beasts gladly using a scheme derived from Eastern ivories or textiles, going back through Sasanian and Achaemenian Persia to Sumerian Cherubim flanking the Tree of Life. We are at the beginning of things in that Near East which is never far from the thoughts of J. L. M.

Ellis H. Minns.

LASITHI IN ANCIENT TIMES

Recent excavations in the district of Lasithi in Crete[1] have both raised and answered a number of historical problems which, while not suitable for inclusion in a strict excavation report, may yet properly be the subject of an essay in honour of one who did so much for the archaeology and topography of Crete in the early days.

It must be remembered that the following pages are suggestions intended merely to stimulate further enquiry on a less restricted scale. In prehistoric archaeology certainty is impossible. A definite set of facts may be interpreted in two quite different ways, both equally possible. The only hope is to fit the greatest possible number of facts into the framework and to make sure that there is no vital fact which contradicts the whole.

The district of Lasithi comprises the range of mountains known in ancient times as Dikte. The plain itself lies nearly 3000 feet above sea level. Although the surrounding mountains seldom rise less than 1000 feet above the plain it is accessible from all directions by tracks which are passible for pack animals even in the worst weather. Thus, it is not surprising that throughout its history Lasithi should have been enough of a self-contained unit to have developed very strong local peculiarities and characteristics yet at the same time not to have been impervious to outside influences which reached it from every direction. This is especially true of the Minoan period when it lay in the very centre of the then populated part of Crete.

The earliest inhabitants of Lasithi seem to have arrived towards the close of the Neolithic period. Whether other sites exist remains to be seen, but at all events the Cave of Trapeza on the north side of the plain was inhabited for long enough to allow the settlers to develop a peculiar local style of pottery. On the hill known as the Kastellos nearby and in the neighbouring cliffs were found the first Neolithic graves which have yet come to light in Crete. As one might expect they were miniature replicas of the homes of the living, small caves or rock-shelters unfortunately too much disturbed to afford more evidence of the burial customs than that the graves seem to have been filled with small stones.

This stage of culture, as can be imagined in so remote a district, seems to have survived well into the succeeding Early Minoan I period as is shewn by the extreme rarity of EM I pottery in the district.

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[1] *BSA* XXXVI p. 5 ff. and a forthcoming number of the *BSA*. See particularly the map of the district *BSA* XXXVI p. 7. The following article is the result of many symposia with Miss Money-Coutts and Miss Pascoe during the course of the dig. It is impossible to apportion the blame for any suggestion with certainty.

Before Early Minoan II, however, the inhabitants of Trapeza had ventured out and built houses on the Kastellos, but old custom still held as usual for the dead, who continued to be buried in caves. By now, however, the practice of communal interment had come in and the old dwelling place, Trapeza, was converted into the cemetery.

The prosperity of the district seems to have increased in Early Minoan III, for an extremely rich deposit of this period has been found.

In Middle Minoan I the Kastellos continued to be inhabited, but the new fashion of burial in pithoi had been introduced. These burials are found close to the old cemetery but not in it. At this time in Crete as a whole we seem to find some regularisation of religious customs, as is shewn in the foundation of mountain sanctuaries such as Juktas and Petsophas. The possibility of the worship of the dead, also, must not be ruled out when we look at the special annexes built on to the circular tombs at Agia Triadha and elsewhere in the Messara. Trapeza, then, became a sacred cave important enough to have a very fine eleventh dynasty scarab offered in it as well as a few vases of the MM II style peculiar to the great centres such as Knossos and Phaistos. Before the end of the period, however, it either became choked with a mixture of offerings and earlier bones or fell out of fashion, and the religious associations were transferred to the more impressive cave at Psykhro where the earliest elements belong to the very end of MM II*b*.[1]

Middle Minoan II as a period does not exist in Lasithi. Imports from the great centres are found both at Trapeza and Psykhro, but houses excavated on the Kastellos, which were undoubtedly in continuous occupation, shew MM I pottery below the floors and in the interstices of the walls, MM III pottery as a general floor deposit and a mixture of the two round about outside.

Middle Minoan III as everywhere except in Central and Southern Crete is dull in the extreme, though good bronze tools and inscribed objects shew that the period even here was by no means unprogressive. The Kastellos was inhabited, a settlement on the Papoura was founded, offerings were made in the Diktaian Cave at Psykhro, though a few old-fashioned people still preferred Trapeza.

With Late Minoan I, however, we come to a new stage. There is a big site at Plate just north of Psykhro, partially excavated by the British School.[2] As far as one can see from surface finds the Papoura has grown and the Diktaian Cave is well attended.

Now just as MM I in most of Crete lasts right down to MM III so too

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[1] *BSA* VI p. 101.

[2] *BSA* XX p. 1 ff.

LM I goes straight on to LM III. At Plate, the only site of this period in the district to be excavated, there were not even any signs of the catastrophe which overcame the whole of Crete somewhere about 1400 B.C. *i.e.*, at the end of the LM I–II period. It was so remote that the destroyers never reached it.[1]

But there is one remarkable feature of LM I in the Lasithi district. That is the astonishing number of forts, mostly discovered by Sir Arthur Evans, on the surrounding hills which guard nearly every pass up to the plain. To the east, on the Kalamafka road, are the forts at Lavrakia and Mitataki. On the Kritsa road are Akhladhiais and 'the Kitten's Cistern.' To the north are the castles of Omalais, on the dry slopes of Mount Selena, Ellenika, Giropetre, Rodhakinia and, even further down towards Mallia, Apano Limia. To the west none have yet been found though the walls and forts above Mathia and Kastamonitza built in Venetian times may well be on earlier foundations. To the south the forts of Erganos, though possibly to be connected with the tholoi and other remains of the Intermediate (Sub-Minoan–Protogeometric) Period, may well be dated, from their masonry, to LM I and further south, just above Vianos is a small—again undated—fort, suitably called Korakoviglia.

Such elaborate defences argue some lapse from the peaceful, palmy days one had imagined of LM I and II. Can one argue as follows?

We know that the LM II style of pottery, the Palace Style peculiar to Knossos alone, is in conception of Mainland Greek, not of Minoan origin. Other contemporary features at Knossos also appear to originate from the same source.[2] May there have been some very strong Mainland influence, say perhaps a royal marriage, which split Crete from end to end. After all we have not been so far from that ourselves. Taking the Minoan Lasithiote to be the true ancestor of the modern Lasithiote, the Sphakiote of the east, we can well imagine a setting up of the standard of revolt.[3]

Then comes that sad period LM III. The destruction of the power of Crete immediately before had been for purely commercial and political reasons. There was no question of colonisation. Throughout nearly all the period Mainland influence is non-existent. Then suddenly at the very end of LM III*b* we find an intrusive element. This is the 'Fringed Style' of pottery, a style which goes in for large blocks of paint fringed with short lines or subordinate patterns. It is found in the first burial at Mouliana, at Milatos and at Isopata in conjunction with LM III*b*, at Agios Theodhoros above Vasilike, at Palaikastro and in the Diktaian Cave. It is found more frequently in Rhodes and Cyprus and on the Mainland. Mackenzie many years ago suggested it might be Achaean and compared it with the Warrior Vase.[1] This new style of pottery, which must be dated to the end of the thirteenth century B.C., certainly coincides with the arrival in Mainland Greece of the Achaeans. Mycenae had become the capital of an empire. Since the destruction of the Minoan power nearly 200 years before Crete had been no-man's-land. What could be easier than to grant the fief to Idomeneus with a suitable body of housecarls? [2]

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[1] I have elsewhere tried to show that the destruction of the great centres was due to the action of enemies, not of an earthquake. *Archaeology of Crete*, p. 228 ff. Even if it was an earthquake, however, it does not affect the present argument.

[2] *Ibid.* p. 225 ff.

[3] In Venetian times this was recognised as so great a danger in this district that the plain was put 'out of bounds' on pain of mutilation. Cf. *BSA* XX p. 12.

Then, somewhere about 1100 B.C., the Bronze Age civilisation of the Aegean comes to an end. Its collapse in Crete is marked by the invasion of a people we may reasonably identify with the Dorians. They brought with them Protogeometric pottery, of which the most marked characteristic is the compass-drawn circle, the use of iron, the practice of cremation in place of inhumation and some new style of dress which needed the use of the fibula.

These invaders naturally first settled near the coast. Knossos is their greatest centre, and Anopolis, Gournais, Mallia have all produced Protogeometric pottery. Gradually they pushed on to the rich plains of Pedhiadha and the Messara.

But we must not forget the old Minoan population. They must have been, as I have said above, true ancestors of the modern Cretans. How often has one sat down in a καφφενεῖον and heard a white-bearded Καπετάνιος say:—'ἐπῆρα τἄρματα καὶ ἔφυγα στὴν Μαδάραν.'

And so they must have done then. All over Crete the low-lying undefended sites are deserted and the population flies to the hills. Karphi in Lasithi is not the only site of this type. It may be higher, 4000 feet above sea level, but Vrokastro, Kavousi, Kourtais of excavated sites, are as high, comparatively, above the surrounding country and of unexcavated ones Kandilioro near Vianos, Kastri near Stavrokhori and Ellenika near Oreino are almost higher. Karphi, however, is the most extensive site, it has no later deposit and it is being excavated on the largest scale so that we may be forgiven for relying upon it for most of our evidence.

Being the nearest of these sites to Knossos, may it have been the capital of the old régime? Did some grandson of Idomeneus fly hither? Did he still call himself the Minos of Crete? And did he bring with him the mixture of Achaean and Minoan culture that we find on the site?

This mixture appears as follows. First the architecture. The sanctuary is Minoan. At all events it consists of an open court with an altar and a ledge for the cult statues, themselves in the direct Minoan tradition. The Great House on the other hand is purely Achaean. It consists of a small forehall, a large two-columned megaron from which an ὀρσοθύρη gives access to a store room. But the roof is flat. Next the pottery. Only one fragment of real Protogeometric pottery has been found on the site. All the decoration is either purely ‘ Sub-Minoan ’ or of the ‘ Fringed style ’ which may be Achaean. Many of the fragments shew the typical Mainland trait of bordering the patterns with dots. Similarly typical LH III*b* birds have been found.

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[1] *BSA*, *Cretan Palaces and Aegean Civilisation.*

[2] He himself may well have been a Minoan. We need not worry about his relationship to the 'ξανθός' Rhadamanthys. Even now fair hair and blue eyes are common in parts of Crete never reached by the Venetians.

On the other hand many of the shapes such as skyphoi, craters and kalathoi are purely Protogeometric as is the use of fibulae and of iron.

Can one look at it like this? The Achaeans come to Crete about 1250 B.C. They come as overlords, they live in the rebuilt palaces. Being a small minority they rapidly become thoroughly Minoanised. Then comes the Dorian invasion. Achaeans and Minoans together fly to the hills and found a new settlement. Perhaps the very strong Achaean influence indicates some influx of refugees from elsewhere as well. The Achaean has the chance to build the type of house he has always wanted to build. He does so, except for the roof. He cannot find joiners or masons to build him a gable.[1]

The temple is a different matter. The Achaeans, like the Egyptians, were always courteous to the local gods. They came as a small ruling caste and in the course of a century and a half had naturally adopted the gods of the country. Hence we find at Karphi that our cult-objects are purely Minoan.

What kind of life they led it is almost impossible to imagine. Even in June and July the site is often covered with a swirling mist. I am writing this on June 8th having just had to stop work and come down from the site owing to rain and intense cold. In midwinter the whole site is deep in snow.

Presumably, therefore, the inhabitants descended to the plain at such times of year as were in antiquity mutually agreed to be periods of non-aggression. There are traces of two sites at Mesa Lasithi and Zmaliano in the plain. We know that the district was well wooded in antiquity and presumably the cultivable area close by was greater. But in any case life must have been extremely hard. Since the LM I forts above mentioned must almost certainly have continued in use,[2] we can imagine that the state lived largely by raiding the lowlands.

These conditions seem to have continued for some two hundred years.

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[1] I have just built a house on Karphi and I know.

[2] Coarse sherds, particularly from pithoi of LM I and the Intermediate Period, are almost indistinguishable.

By that time things must have quietened down. The invaders had no doubt intermarried with the old stock. At all events it was safe to come down from Karphi. The city was peacefully deserted. There are no signs of any catastrophe. Such carbonised wood as has been found seems to be due to some natural process. The surrounding earth and the objects found in it afford a strong contrast with those in the few rooms where accidental fires had actually occurred. Furthermore, the extreme rarity of small finds, particularly iron, argues that the evacuation of the site was carried out peacefully. The new city was founded about 900 B.C. on the hill of the Papoura where a tholos tomb of the Geometric Period has already been cleared.

But I think we are justified in postulating an extreme nationalist party, which would have nothing to do with any settlement with the invaders. Now we know that the eastern mountains of Crete—beyond the Thriphte range—were sometimes called Dikte.[1] There is the temple of Diktaian Zeus at Palaikastro and this part of Crete was notoriously the country of the Eteocretans. Is it too much to suppose that these Eteocretans took the name with them and that there were in fact two Diktes at the same time? [2]

The new city on the Papoura grew apace and by Archaic times it seems to have become, with its suburbs of Kolonna, Donadhes, Bagali and Kardhamoutsa, the fourth largest city of Crete. Another large town of the period exists on and around the Kephala by Agios Konstantinos and from the seventh century onwards Lasithi thrived. It is the more remarkable, therefore, that neither the city on the Papoura nor the plain as a whole ever seems to be mentioned in any ancient author. Perhaps this is due to the fact that in those times of rapid progress Lasithi was something of a backwater. No inscriptions from the district are known, finds of coins are very rare, Archaic types of pottery go on well into the Classical Period and early in the Archaic Period, symptomatic of the general shift of power westwards, the birthplace of Zeus was transferred from Psykhro to Mount Ida.

The unprogressive prosperity of the plain continued down to Roman times, to which perhaps may be dated the Λίνιαις, those waterways which divide the western end of the plain into rectangles. In Byzantine days there was a big settlement at Avgouste under the Kephala and several churches were founded. In Venetian times, as was said above, the plain was depopulated but it must almost certainly have been resettled by descendants of its old inhabitants for the local tradition is stronger here than in any part of Crete. Not apropos of the discovery of human bones nor yet of legendary treasure we have heard the legend of the funeral procession of a king to Trapeza. And the last burial in that cave was four thousand years ago.

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[1] Strabo, X iv.

[2] Toutain, *Cavernes Sacrées*, suggests that there may be a second Diktaian Cave in the east. The only possible candidate I have been able to find is Latsidha above Pefkoi near Praisos. It is too choked with stones for anything to appear on the surface, but it is the most impressive cave in that part of Crete.

J. D. S. Pendlebury.

THE PART OF PYLADES IN AESCHYLUS' *CHOEPHOROE*

Such editors of Aeschylus as have time left from considering difficulties of the text to deal with larger problems of structure and presentation remark on the fact that Pylades speaks but three lines in the whole play. Verrall, for instance, who despite his many and great shortcomings as a scholar never lost sight of the essential fact that Aeschylus is a dramatist, draws attention to and attempts to justify it.[1]

> 'In the primitive legend the importance of Pylades was merely that of a wheel in the mechanism. His help and means made the enterprise of Orestes possible; and he rendered help, because he was a pious man whom Apollo ordered to do it. The way of exhibiting him dramatically, as a remembrancer of the god's injunction, is probably a device of Aeschylus' own, and is worthy of his genius for broad and simple effects. . . . So long as all is proceeding in due course, he watches in silence. . . . Only at the last, when the emissary flinches, the guardian opens his lips to insist on obedience; and with that his essential part is done.'

Elsewhere, he says a little, but not enough, about the actors needed for the performance.[2]

> 'If only three were employed [here in a foot-note he cites the opinion of Richter that there was no such limitation] the parts of the manservant (*v.* 874) and Pylades (*v.* 899) must have been somewhat inconveniently "doubled," as the ancient commentary observes, by the same performer. There is no other evidence as to the distribution.'

There is indeed no external evidence for the division of the parts among the three actors, save the brief note which Verrall cites, schol. on 899, μετεσκεύασται ὁ ἐξάγγελος εἰς Πυλάδην, ἵνα μὴ δ' λέγωσιν. But I think, if we consider the internal evidence, the casting of the play becomes quite obvious and not at all complicated. That there were three actors for the trilogy is of course clear, even if we had no tradition as to the date when the third was introduced. Neither the scene of Agamemnon's entrance with Kassandra to meet Klytaimestra (*Aga.*, 810 *sqq.*) nor the trial scene in the *Eumenides* (566 *sqq.*) could possibly be represented by fewer. This makes it all the odder that an experienced playwright should either divide a part between an actor (for *Choeph.* 900–02) and a mute person (for the earlier scenes) or leave a third of his little troupe with no more than a walking-on part for the bulk of the action. His famous silent figures are not so silent as that; Prometheus for example, when he does open his mouth, speaks at great length and to some purpose. The rôles I take to have been divided among the three actors as follows, omitting for the present all mention of the scene I wish to discuss.

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[1] P. xix *sq.* of his edition of the *Choephoroe*, London 1893.

[2] *Ibid.*, p. xxxii.

Protagonist. Orestes.

Deuteragonist. Elektra (22–580, when she takes Orestes' final directions and leaves the stage, not reappearing); the Porter (one line, off-stage, 657); Klytaimestra (668 *sqq.*); and, I think, the Nurse (734 *sqq.*), although the tritagonist might have played this, for it requires an actor who is good at female parts.

Tritagonist. Pylades, whenever he appears; Aigisthos (838–54; the tritagonist seems commonly to have been given the tyrant's part, see Demosth. xix 247, and cf. O. J. Todd in *C.Q.* xxxii 30 *sqq.*, for the latest discussion known to me of the number of actors employed in the fifth and fourth centuries); the Servant (875–886 or 892, when he runs into the palace through the door which Klytaimestra or an attendant has opened); Pylades again, 900, or 899–end. Here Todd somewhat overstates the difficulty of the ' quick change ', when he says (p. 31) that ' it would not seem impossible for an actor to shift cloak and mask within the space of five lines '. The actual amount of text is at least seven lines, 892–99, for surely Pylades does not appear from the palace (where we may suppose him to have been taking precautions that none of the servants interfere) till he hears his name called by Orestes. Moreover, there is a not inconsiderable amount of ' business ' by the actors who play Orestes and Klytaimestra. She comes out of the palace at 891, or even earlier (at 886 she presumably appears at the door and speaks from it). Orestes greets her sternly with σὲ καὶ ματεύω; there is now a short pause while the *ekkyklema* rolls out with the body of Aigisthos upon it, and Orestes points it out to his mother (τῷδε δ' ἀρκούντως ἔχει). She wails, and with two lines of reproach and threat (894–5) he sets upon her. There is now, as I interpret it, a struggle in which her dress is torn, for in 896–7 her breast is bare and she is pointing to it. However, she may have bared it herself, as Hekabe does, Iliad xxii 80. In either case, the action takes some little time, enough for the tritagonist to slip out of the slave's costume behind the back-scene and put on his Pylades-mask and robe. It is then perfectly possible to play the tragedy with three actors and no more, and unnecessary to suppose the presence of a *parachoregema* to speak the three momentous lines which settle Klytaimestra's fate.

But the interesting question is rather: what is the tritagonist doing between lines 1 and 718? It is not unnatural that he should be silent while the brother and sister meet, nor that he should have nothing to say or sing during the great series of invocations to the ghost of Agamemnon and the powers of the lower world. Agamemnon is none of his kin, and the whole rite is a family affair. He probably stands by in total silence, or even moves away, perhaps making a show of standing guard against any possible intruders from the house.[1] But it is not so easy to see why he says nothing and apparently does little at the critical moment of the entry into the palace, when he is the one character friendly to Agamemnon's children who has a right to enter unsuspected. I believe that he is active and vocal in this scene and that Aeschylus tells us so.

Perhaps the most neglected feature of that great poet's genius is the number of fine psychological touches which he brings in with few words and no elaboration. The character of Orestes is not his least happy portrait of a human soul under stress. He is, by all tradition, quite young, and Aeschylus, while giving him something of a man's firmness and resolution, also gives us plenty of evidence that he is still little more than a boy in years and also in natural feelings, so far as the horrible events in which he is forced to play a part have left him any. There is surely something of a boy's *naïvété* in 225, where he is clearly rather astonished that Elektra does not recognise him; like most people, he is apt to forget that he has changed in appearance since he was a child. But he recognises her at sight (16), perhaps not only because she is the only young woman who would be likely to lead a procession of mourners from the palace to the tomb. I fancy that Aeschylus, like Sophokles (*El.*, 12), thinks of her as his elder sister. Hence to Orestes it is rather disappointing that she should not at once know the child she used to play with, to whom she gave a bit of woven embroidery (231), now produced as a further piece of evidence that the stranger is really her brother. This is significant; one of his great difficulties is the danger of recognition, none the less formidable for being largely imaginary. Why, then, should he put himself forward at the moment of entry and leave Pylades, who so far is risking little or nothing, in the background? Yet, in our texts, this is what he does, from line 653 on.

But it is to be noted that the assignment of these verses to Orestes is nothing more than a conjecture. M. marks off the speeches only by a *paragraphos* at 653, 657, 658, 668, 674, 691, 700, 707. Of these, 657 is obviously spoken by the porter; 668, 691, 707 are as obviously Klytaimestra; but sense and dramatic fitness are at least no worse satisfied if the rest is spoken by Pylades than if we give it to Orestes. Someone comes to the door, speaks with a Phokian accent (563) [2] and says he is from Daulis and, having business in Argos, has been asked by Strophios to bring word of Orestes' death. Whoever he is, the tale is false, since Orestes is alive and present; but who he is is a question on which ancient authorities, so far as I know, hazard no conjecture. But I think it not unimportant that the chorus, who know perfectly well who Orestes is, speak of this speaker simply as ἀνὴρ ὁ ξένος (730), and that when Klytaimestra and her attendants are out of sight, within the palace. If he is Pylades, they very naturally do not name him, for no one has introduced him; his name has been mentioned once, by Orestes to his sister, in passing (562; he does not turn to the chorus till 581, and then refers to his friend simply by a pronoun). In any case, Pylades is not a familiar person to the maid-servants of the royal house.

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[1] However the tomb was represented and wherever it may have been, it is evident that Aeschylus intends the audience to suppose it out of ear-shot, perhaps even out of sight, of the palace. Contrast Soph., *El.*, 1326, where the old attendant chides the brother and sister for talking so much and so loudly; evidently it would not be hard to overhear them. But no one in Aeschylus is at all apprehensive that the elaborate and far from silent appeals for vengeance and supernatural aid of the long *kommos* will attract any attention.

[2] I do not, however, agree with E. Harrison (*C.R.*, L 11) that any Phokisms are actually to be looked for in the text. The language is the 'Attic' of the stage, of course

But line 562, I believe, tells us Orestes' whole plan, if we get rid of one small corruption in it, of a kind so common that it is hardly worth mentioning except in a full *apparatus criticus*. As it stands, no acceptable sense can be got out of it, which is why the editors either make unconvincing attempts to explain it or, in Murray's case, think it spurious. It runs, in M., thus:

(ἥξω σὺν ἀνδρὶ τῷδ' ἐφ' ἑρκείους πύλας)
Πυλάδῃ, ξένος τε καὶ δορύξενος δόμων.

But in what sense can Orestes be called a δορύξενος, either in reality or in the part he is to play to gain admission? We know what the word means, rare though it is; Liddell-Scott-Jones correctly says 'spear-friend, *i.e.*, war-friend, ally', rejecting the curious idea of Plutarch, or rather of the unknown grammarians whom Plutarch and others draw upon (see Halliday on Plut., *quaest. Graec.*, 17), that it means a guest who was once an enemy. So it is used of Strophios, *Agam.*, 880, certainly no enemy past or present of the Pelopidai, and in this echo [1] of the former passage it is not unreason-

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far removed from that of real life, but what Attic audience would recognise it as Phokian when the characteristic North-western retention of the primitive ᾱ is nowhere to be found? I hold rather with Wecklein *ad loc.*, that such realism belongs to Comedy, not Tragedy. So the Danaids, who apologise for their barbarian language (*Supp.*, 119, 130), speak as good Greek as anyone else in the play. The audience are to imagine a Phokian accent, as in some modern Irish plays they are to imagine that the characters are talking in Erse.

[1] Echoes in a later passage of an earlier one are common in Aeschylus and often significant. See for example, in this play, 924–1054, the threat of the avenging Erinyes and its fulfilment; 999, cf. *Agam.*, 1115, where Orestes, already a little disordered, echoes the raving Kassandra's language; 1014, cf. 8, where he declares that he now can and does fulfil the duties towards his dead father which he then perforce neglected. It is probably of no significance that in 768 the chorus uses Aigisthos' own name (Agam., 1650) for his bodyguard. Of course such verbal self-imitations must not be overstressed, for they occur in all authors, from mere association of similar ideas with the same or like words.

able to expect that it should be used of some member of his household. His son being present, it would be natural to look for a mention of him in such a way. Orestes is of course not an ' ally ' of his own family, and he is pretending to be, not a regular ξένος, but a casual stranger with a message to deliver; if, that is, we follow the ordinary assignment of the speeches in this scene. But make the commonest of emendations, δὲ for τε, and all is clear. Orestes says, ' I will come to the gates of the courtyard with this man, Pylades, *for* he is a friend and ally of the house.' That being so (and presumably Pylades carries some token, like a Latin *tessera hospitalis*, which can establish his identity, if necessary, and procure him admission), the task of getting past the gate is much lightened. Even if Pylades is recognised by Klytaimestra, she has no colourable excuse for not letting him come in to the guest-rooms; she professes to regard his father in a friendly light, and officially he has done no more than shelter, at her own request, the son of the house, whose life was thought to be in some danger from popular unrest (Agam., *loc. cit.*). The worst that can happen is that she will have him watched closely, for certainly in her position she cannot afford to bring on a blood-feud with a man of some influence like Strophios by violating hospitality and killing his son. But if he can enter unrecognised, merely as a traveller who does not know Strophios personally and happens to have been given a message from him, so much the better. I take it that he comes up to the gate, calls the porter, and when Klytaimestra appears, sees that she does not know who he is, and so begins his feigned story confidently. He has prepared the ground in 656 by not claiming hospitality as a right, which he might have done in his own person, but merely asking for it. I suppose Orestes to follow him, carrying some of the luggage and with his petasos shading his face; his mother's real or sham grief occupies her too much to look closely at the supposed messenger's following.

If we assign the parts thus, I think we get, what Attic tragedy loves, an extra double meaning in lines 700 *sqq.* ' I could have wished ', says the speaker, Pylades as I suppose, ' to have become acquainted with such wealthy hosts on a happier occasion, and enjoy their hospitality; for what kindlier bond is there than between host and guest? But I counted it impious not to accomplish such a task for friends, when I have promised and am made welcome '.[1] Every word, almost, is ironical. It is literally true that he would have been glad to know Orestes' kin κεδνῶν ἕκατι πραγμάτων; he has every reason to wish that the relations between his personal friend and the rest of the family were normal and happy. The bond between him and the ξένος he means is of the closest, and it would have been serious impiety on his part not to 'put the head on' the adventure, for he has promised, and that on oath, 901, to see it through. Yet all this can be interpreted, and is interpreted by Klytaimestra, who does not know that any other ξένος of the speaker is present, as mere polite regret at having to deliver so unpleasant a message on first acquaintance with a high-born lady whom he knows by repute.

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[1] ἐγὼ μὲν οὖν ξένοισιν ὧδ' εὐδαίμοσιν
κεδνῶν ἕκατι πραγμάτων ἂν ἤθελον
γνωστὸς γενέσθαι καὶ ξενισθῆναι · τί γὰρ
ξένου ξένοισίν ἐστιν εὐμενέστερον ;
πρὸς δυσσεβείας⟨δ'⟩ ἦν ἐμοὶ τόδ' ἐν φρεσίν,
τοιόνδε πρᾶγμα μὴ καρανῶσαι φίλοις
καταινέσαντα καὶ κατεξενωμένον.

If then, by assigning to Pylades the lines conventionally given in our printed editions to Orestes, we contradict no external evidence and obey certain hints in the text; if we get more intelligible conduct on the part of the chief character and add point to one of the speeches; and if we need make no change in the text save an emendation of one letter, which results in giving meaning to a line hitherto devoid of reasonable sense, I think we are justified in replacing the stock guess as to who speaks the verses in question by another at least as probable in itself.

H. J. Rose.

THE FIRST TRIAD OF NEMEAN I

The general theme of the ode, is labour leading to peace and happiness: Rest is the first word, Home is the last, and between we have the Labours of Heracles indicated by a specimen, his earliest feat of prowess. The poet need not give a complete catalogue of the labours, which every child knew by heart; nor need he give any special one, such as the Nemean Lion: he gives the first, and leaves the etcetera to take care of itself. And by this choice of the first, he brings out one of the underlying thoughts—that natural ability is the great thing. No one can have taught a baby just born what to do when serpents appear. As regards Chromios, the choice of Heracles was proper, if he claimed to be himself a Heracleid, as seems likely; and the general parallel of a long life of labour is close enough, without pressing a detail.

If then, to come home after hard labours is the main thought, there is something in the usual interpretation of θέμεν αἶνον (5) and ἀρχαὶ βέβληνται (8) as architectural metaphors. For we have

19. αὐλείαις θύραις, associated with hospitality:
31. ἐν μεγάρῳ, with the same:
41. οἰχθεισᾶν πυλᾶν
ἐς θαλάμου μυχὸν εὐρὺν ἔβαν, with labours:
71. ὀλβίοις ἐν δώμασι,
72. σεμνὸν δόμον, associated with rest and happiness.
The two thoughts are linked by the mechanical call ἔσταν:
19. ἔσταν δ᾽ ἐπ᾽ αὐλείαις θύραις
ἀνδρὸς φιλοξείνου καλὰ μελπόμενος,
with its picture of hospitality and fine music in the house of a *man*, one of the words which will be prominent in the next ode IX:[1] and contrasted, the picture of Amphitryon, in his house, full of horror and joy at once, as he gazes on the first marvellous feat of infant Heracles,
55. ἔστα δὲ θάμβει δυσφόρῳ
τερπνῷ τε μιχθείς.

It is quite clear that the image of a house, down to its details, is being impressed on us, and leading up to the climax in the last words; where ἄμπνευμα (1) and θάλος (2) are echoed, and raised to a spiritual value, by θαλερὰν Ἥβαν (71) and σεμνὸν δόμον (72).

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[1] Next in my Pindar; also in honour of Chromios.

But I am not so sure about the images in the first triad. Taken by themselves, they suggest other thoughts than building; and line 19, which has puzzled everyone, is usually taken to contain the commonplace image of shooting a bolt. Let us examine that section, putting aside preconceived ideas, as if we did not know what was coming.

We get first, then, θάλος an offshoot, a noun connected with θάλλω 'to bloom.' A few pleasing commonplaces follow, which suggest rest (δέμνιον) and family life (κασιγνήτα), a word to be used later in pointing a contrast; and then 'from thee starts out a hymn' to θέμεν αἶνον. If the thought starts out from a blooming plant, it should not lead us to a building; and θέμεν αἶνον seems at first sight no more than a paraphrase, like ποιεῖσθαι αἶνον, for αἰνεῖν. The poet goes off now to his commonplaces, such as the public demanded—imagine a crowd cheering victors in the Cup Final; when they read the papers next day, will they not demand some allusion to their heroes and their clubs? And so we have Chromios in his car, yoking a melody to his victorious deeds, and pushing on the poet, in a phrase also to be recalled later.

Thus the second line of the strophe has suggested a blooming plant, and now we come to the first line of the antistrophe,

8. ἀρχαὶ δὲ βέβληνται θεῶν,

again with no definite allusion to building; for βάλλω is a word which takes colour from its context, and the context, so far, is the growth of plants. A commonplace follows, which contains however a phrase which needs consideration, the top of good opinion,

11. πανδοξίας ἄκρον:

then another commonplace, and a distinct metaphor from the garden, please scatter a few seeds of splendour for the island,

13. σπεῖρε νυν ἀγλαΐαν τινὰ νάσῳ,

which is a masterpiece of the fruitful earth,

14. ἀριστεύοισαν εὐκάρπου χθονός,

the last line of this antistrophe; and following it, the first of the epode, Sicily the fat, which he will plant straight up with summits of cities, in affluence,

15. Σικελίαν πίειραν ὀρθώσειν κορυφαῖς πολίων[1] ἀφνεαῖς,

where new and important associations come in with the words ὀρθός and πόλις. Again follow commonplaces, but these, like the others, all have point for Chromios's career; and the last line of the triad, which has been the cause of reams of commentary,

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[1] Prolonged musical notes are underlined.

18. πολλῶν ἐπέβαν καιρὸν οὐ ψεύδει βαλών.

Here is βάλλω again, to which the critics give another meaning, shooting a bolt. I find no fault with a casual use of this metaphor, which is common everywhere; but do not let us accept it without consideration.

And very short consideration shows that βάλλω has also a garden sense, dropping the seeds:

Theocr. XXV 25, σπόρον ἐν νειοῖσιν
ἔσθ' ὅτε βάλλοντες καὶ τετραπόλοισιν ὁμοίως:

Kaibel *Ep. Gr.* 1038.8, ἐς πέλαγος σπέρμα βαλεῖν, a proverb.

In prose, the compound ἐμβάλλειν is usual,

Xen. *Oec.* xvii.10, ἐμβαλὼν τὸ σπέρμα τῇ γῇ. So. 11.

And in the Ptolemaic papyri of the third century B.C., ἐμβαλεῖν is a regular word for planting and sowing: e.g. τὰ μοσχεύματα ἐμβαλεῖν (*Zeno Papyri*, Cat. Gen. Cairo Museum, vol. 1, 59125). In close connexion with σπεῖρε, I take it as certain that βαλών means dropping seeds. καιρὸς also is a word constantly on the lips of farmers, who from Hesiod onwards have to consider the proper days for their works.

βάλλω has another garden association, as the following passage will show (*Geoponica* ix 8). How to make an olive fruitful:

> τρύπησον τρυπάνῳ τὸ στέλεχος διαμπάξ, καὶ λαβὼν κλαδία β′ ἀπὸ ἑτέρας πολυκάρπου ἐλαίας, τὰς ἀρχὰς τῶν κλάδων ἐξ ἑκατέρου μέρους βάλε, ὥστε εἰς τὸ πέραν διελθεῖν, καὶ ἐπιλαβόμενος ἀμφοτέρων τῶν κλάδων ταῖς χερσὶν ἕλκυσον ἰσχυρῶς. ὅταν δὲ σφηνωθῇ (wedged in), ἀπόκοψον ἀπὸ ἑκατέρων μερῶν τὰ περιττά, τουτέστι τὰ ἐξέχοντα τῶν κλάδων, καὶ πηλῷ μετὰ ἀχύρου διάχρισον (smear) τὰς ἑκατέρωθεν ὀπάς, καὶ γίνεται ἡ ἐλαία πολυφόρος καὶ καλλιέλαιος. (From Africanus.)

Here we find actually ἀρχαί and βάλλω together: 'take two twigs, and strike the beginnings of the twigs into the holes on either side.' We find also the phrase ἐμβολάδες ἄπιοι (Aristotle frag. 251), συκαῖ (Plutarch II 640 B), ἔμβολος a graft or grift (τὸν ἐν τῷ ἐμβόλῳ ὀφθαλμόν *Geopon.* X 77 4): the compound, as so often, being the common form in prose. That it is not a later invention, we see from Demosthenes, one of whose scoundrels entered an orchard by night,

> ἐλθὼν εἰς τὸ χωρίον νυκτός, ὅσα ἐνῆν φυτὰ ἀκροδρύων γενναῖα ἐμβεβλημμένα καὶ τὰς ἀναδενδράδας ἐξέκοψε, καὶ φυτευτήρια ἐλαῶν περιστοίχων κατέκλασεν, οὕτω δεινῶς ὡς οὐδ' ἂν οἱ πολέμιοι διαθεῖεν (*Nicostr.* 1251. 22).

These gardening terms are likely to last for ever. Θαλλός is common in the *Geoponica*, and both θάλλω and εὐθαλής are used. It is worth noting that another compound, ἀπαρχαί, was used of first fruits.

The gardener, then, might have used in common speech such a phrase as

ἀρχαὶ βέβληνται κλάδων,

and if we suppose Pindar to have had this in mind, the genitive θεῶν in his variant is explained at once; a point which has caused much heartburning among the critics. Bury takes ἀρχαὶ βέβληνται as equivalent to κρηπὶς βέβληται, because it is proper ἄρχεσθαι ἀπὸ θεῶν. Farnell is half inclined to emend βέβλητ' ἐκ θεῶν, but is content with the paraphrase ' the ode's foundations have been laid in mention of deities.' But he is so little confident, that he asks whether ἀρχαὶ θεῶν are οὐλοχύται, quoting Iliad i. 458, οὐλοχύτας προβάλοντο. Paley paraphrases, ' A foundation is laid of the gods, viz. of praising them.' Holmes says, ' Now of heaven have been laid the foundations that sustain yon hero's godlike merits,' an entirely new turn of thought, where ' foundation ' and ' sustain ' are simply imported. Sandys: ' The foundations of our song have now been laid in the names of the gods.' They all have foundations on the brain, as they all have whetstone on the brain in another place; but neither word is in Pindar, and that must not be forgotten now. Farnell is more accurate; and he gives no colour to the word ἀρχαί: ' I have set the names of divinities in the forefront of the song,' but he also imports ' names.' This disagreement of doctors is a proof that all the suggested renderings are unsatisfactory; and none of them makes sense without importing something which is not there. The words literally mean, ' the gods ' beginnings have been cast, or ' struck '; and according to context, the image may be an arrow, or a seed, or a foundation, or as we see now a graft, for which we use the same word, ' strike.' The vague general sense is, we have begun with the gods, and so far, the commentators are on safe ground.

One or two points remain. The expression θέμεν αἶνον, which in a vague sense is ' to put a praise,' much the same as ποιεῖσθαι αἶνον ' to make a praise,' may also suggest planting a tree; so we see from Xenophon (*Oec.* xix 9) πότερον δὲ ὅλον τὸ κλῆμα ὀρθὸν τιθεὶς [1] πρὸς τὸν οὐρανὸν βλέπον ἡνεῖ μᾶλλον ἂν ῥιξοῦσθαι αὐτό, ἢ καὶ πλάγιόν τι ὑπὸ τῇ ὑπερβεβλημένῃ γῇ θείης ἄν, and so forth.

And even the innocent word ἄκρον (10) may recall the ἀκρόδρυα, a general word used for fruit-trees although properly said of a fruit with a shell or husk on the top or outside (ἀκρός top, δρύον wood); the Greeks, however, thought the word meant tip-top or best produce of the trees, the fruit, or tip-top trees, as Theocritus implies when he says ὅσα δρυὸς ἄκρα φέρονται (xv, 112). So an inscription from the Cures of Epidaurus, of Roman date (Dittenberger 804^{10}) κιτρίου προλαμβάνειν τὰ ἄκρα, citron fruit; which late as it is, shows that ἄκρον in common talk meant a fruit. So ἀκροθίνια· αἱ τῶν ἐνιαυσιαίων καρπῶν ἀπαρχαί, Suidas.

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[1] Compare Pindar's ὀρθώσειν, line 15.

Finally, ἔργμασιν (8) has a general meaning in agriculture, that is, cultivation.

I take it then, we have a consistent image carried throughout the first triad; that cultivation of the soil which is man's friend, as Xenophon says (*Oec.* xix 17) ἡ γεωργία οὕτω φιλάνθρωπός ἐστι καὶ πραεῖα τέχνη ὥστε καὶ ὁρῶντας καὶ ἀκούοντας ἐπιστήμονας εὐθὺς ἑαυτῆς ποιεῖν. What image could be more to the heart of peace-loving Pindar, who is here singing of quietude after storm, and in the other ode prays that war may be averted? And what suits a happy home better than a garden? If this is right, the thought runs as follows: 'Ortygia, blooming plant, bed of Artemis, my hymn sets out to plant praise for Chromios and thanks to Zeus; the gods' first-shoots have been struck, along with Chromios's deeds of prowess. Good luck is the top-fruit of renown. But now, my Muse, please scatter a few seeds of splendour for the island, which Zeus promised to make a fat and fruitful land, and to plant it upright like standing corn, with civilised life and abundance, and he has filled it with warriors and sportsmen—why, what a lot of plants are in season!—and I have not dropt one grain in falsehood,' out of season, in a mistaken belief. Pindar has the garden in his mind elsewhere, as Ol. ix 26 εἰ σύν τινι μοιριδίῳ παλάμᾳ ἐξαίρετον Χαρίτων νέμομαι κῆπον, where again he uses a regular gardener's phase, 'if I have a bit of a planting hand' as we say.

For those who prefer it, a perfectly simple rendering of the lines is possible, without any difficulty, except ἀρχαὶ βέβληνται θεῶν; and it is just this difficulty which makes me doubt the simple rendering.

Do not fail to note the playful tone of 13 and 18. Pindar is fond of using τις in a playful way; 'sprinkle a handful of seed'; 'sow a bit of splendour,' and when he winds up, 'why, what a lot of plants we find to be in season here!' he calls special attention to this by the metre. The last line contains two prolonged notes, where the long syllable has double time, minim instead of crotchet; he always uses this device in his verse for dramatic effect, or to bring out the points.

W. H. D. Rouse.

SUR UN CRATÈRE MYCÉNIEN DE RAS SHAMRA

Lieu de trouvaille et date. Le cratère à représentation de char qui fait l'objet de cette étude a été trouvé au cours de notre huitième campagne de fouilles parmi les ruines d'une habitation, au pied de l'acropole nord-est du tell. Il y a là dans les couches du 1^er^ niveau les vestiges d'un quartier datant des XV^e^–XIII^e^ siècles. L'une des maisons était habitée par un artisan qui semble avoir pratiqué le métier d'orfèvre, à en juger par la balance de précision, le jeu de poids et le moule que nous avons retrouvé dans son habitation. C'est à lui aussi qu'appartenait peut-être le cratère dont les fragments ont été recueillis au même endroit. La profondeur à laquelle ils furent rencontrés et le contexte archéologique permettent d'attribuer ce vase au XIV^e^ siècle avant notre ère.[1] Sa hauteur est de 46$^{\text{cm}}$, le plus grand diamètre de la panse est de 37$^{\text{cm}}$. 5, fig. 1.[2]

Description. La peinture présente un vernis à léger reflet métallique; aux endroits où elle est appliquée en couche épaisse, elle est craquelée comme la surface d'une vieille toile et tend à s'écailler. La couleur est rouge vif, passant au brun foncé par endroits, suivant l'épaisseur de la couche et le degré de chaleur auquel pendant la cuisson la paroi a été soumise, température qui différait suivant la position du vase dans le four. À l'endroit d'une légère dépression de la panse, une petite tache au cerne noirâtre marque un coup de feu ou le contact accidentel avec un autre récipient durant la cuisson. Certains détails du harnachement sont peints en une couleur d'un blanc tirant sur le crème, superposée au rouge du corps des chevaux. Le blanc de leurs yeux et celui des personnages par contre est obtenu par réserve.

La peinture est posée sur un engobe de couleur beige, très fin et doux au toucher appliqué probablement par immersion du vase avant que les anses étaient fixées, car le côté intérieur de celles-ci est resté brut.

Les anses sont percées de deux séries de trois trous, l'une à la base, dans la partie la plus épaisse, faisant un angle d'environ 45° avec l'horizontale, et

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[1] Le cratère a été trouvé à 3 m. 25 de profondeur dans une strate intacte (point 138, chantier III) à proximité d'un moule bivalve pour pièce d'orfèvrerie reproduit dans C. F. A. Schaeffer, *La huitième campagne de fouilles à Ras Shamra-Ugarit*, *Syria*, XVIII, 1937, fig. 17 et dans *The Cuneiform texts of Ras Shamra-Ugarit*, London 1939, pl. XIX, 2.—Sur la date des cratères de ce type cf. aussi E. J. Forsdyke, *A Late Mycenaean Vase from Cyprus*, in *Essays in Aegean Archaeology*, Oxford, 1927, p. 27.

[2] Les figures 1–3, 23 et 24 d'après des dessins de Madame A. Schaeffer-Boehling, figs. 6, 16 d'après des dessins de M. G. Chenet, les autres figures d'après des dessins ou copies de M. G. Gaudron.

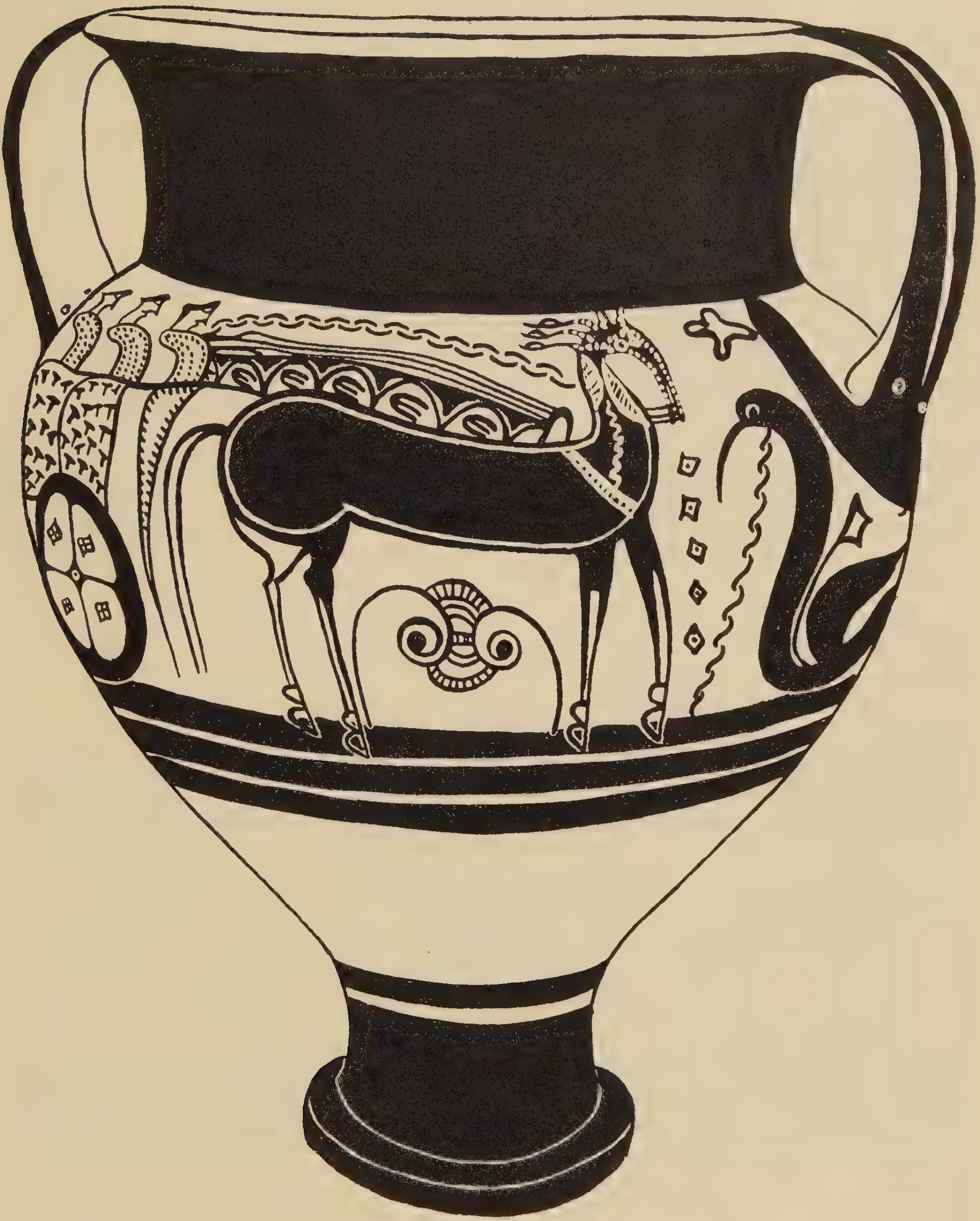

Fig. 1.—Cratère Mycénien à Figuration de Char et Oiseau Capturé de Ras Shamra (XIVᵉ s.).

l'autre au sommet, de direction à peu près verticale. La disposition de ces trous est telle qu'un fil peut aisément passer d'un trou de la base dans le trou correspondant du sommet. Ce fil d'un diamètre maximum de 1^{mm} devait être en métal ou s'il était fait d'une matière souple il fallait l'introduire à l'aide d'une aiguille. La destination de ces trous est difficile à préciser. Ils pouvaient servir, soit à suspendre le vase en répartissant ainsi son poids sur les deux attaches de l'anse,—soit à fixer un couvercle ou une obturation en tissu. Enfin on pouvait les utiliser pour attacher aux anses des ornements divers, à la manière, par exemple, des garnitures de situles hallstattiennes, ou bien pour fixer des scellés avec cachets comparables à ceux en terre trouvés à Ras Shamra.[1]

Les bandes horizontales et les larges zones qui ornent le col, le bas de la panse et le pied ont été appliqués pendant la rotation du vase sur le tour. Le dessin des scènes par contre est exécuté au moyen d'un pinceau fin, à main levée et avec une étonnante habileté. Par endroits le tracé est bordé des deux côtés par un trait plus foncé, très mince, comme si le peintre avait commencé par dessiner la silhouette avant d'en faire le remplissage. Mais ce trait foncé cernant la peinture ne s'observe que sur des tronçons de longueur assez irrégulière. Il est donc improbable qu'il se soit agi là d'une préparation de la peinture par un dessin. Le trait peut avoir été produit par une sorte d'oxydation de la couleur à son contact avec l'engobe. Quoi qu'il en soit, c'est un fait que la plus grande partie de la scène a été peinte par des coups de pinceau tracés sans aucune hésitation et sans repentirs. On peut observer très nettement dans quel sens le peintre a exécuté son dessin. Le pinceau chargé de couleur débite d'abord un trait gras, qui devient plus maigre, s'effiloche parfois et s'épuise vers la fin.

Habileté du peintre. Certains détails attestent l'habileté du peintre: le contour élégant des jambes des chevaux est figuré par quatre traits, deux pour le profil extérieur avec le galbe bien arrondi des muscles extenseurs de la cuisse et deux pour indiquer le boulet et le sabot. La sûreté avec laquelle le peintre a tracé aussi les motifs de remplissage, d'un dessin parfois assez compliqué (notamment les spirales) atteste également sa maîtrise. Par ailleurs le dessin est visiblement d'une exécution rapide et témoigne d'une extrême routine, fruit d'une longue pratique. Celle-ci cependant n'a pas diminué le sentiment du dessin, resté très vif malgré une tendance indéniable vers la stylisation. On sent chez le peintre une réelle sensibilité d'artiste : il se plaît à accuser certaines caractéristiques pour donner plus d'élégance au dessin, par exemple la longueur du corps des beaux coursiers, leur encolure en col de cygne. D'autre part, l'allure générale du personnage qui précède l'un des chars, fig. 2, notamment

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[1] C. F. A. Schaeffer, *La cinquième campagne de fouilles à Ras Shamra, Syria*, XV, 1934, fig. 8 et Ch. Virolleaud, *Etiquettes, ibid.*, p. 134.

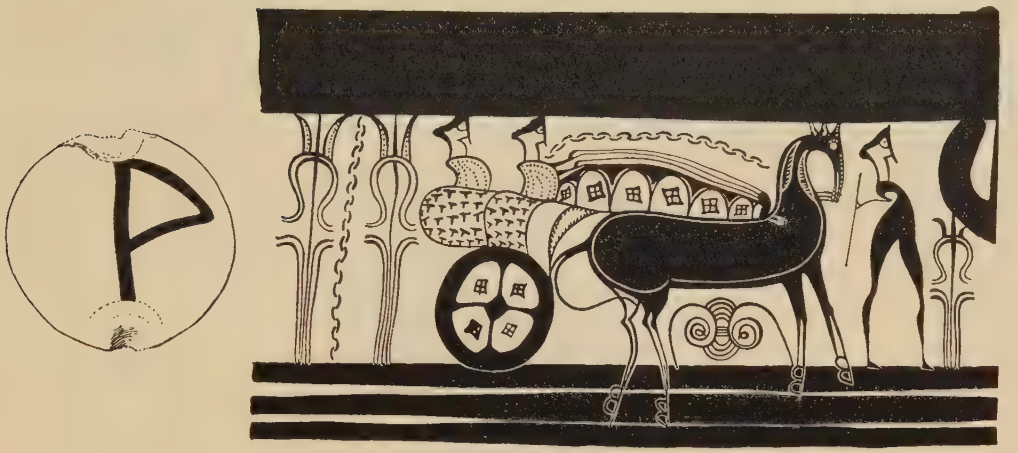

Fig. 2.—Panneau A du Cratère de Ras Shamra. À Gauche Marque Peinte en Rouge sous le Pied.

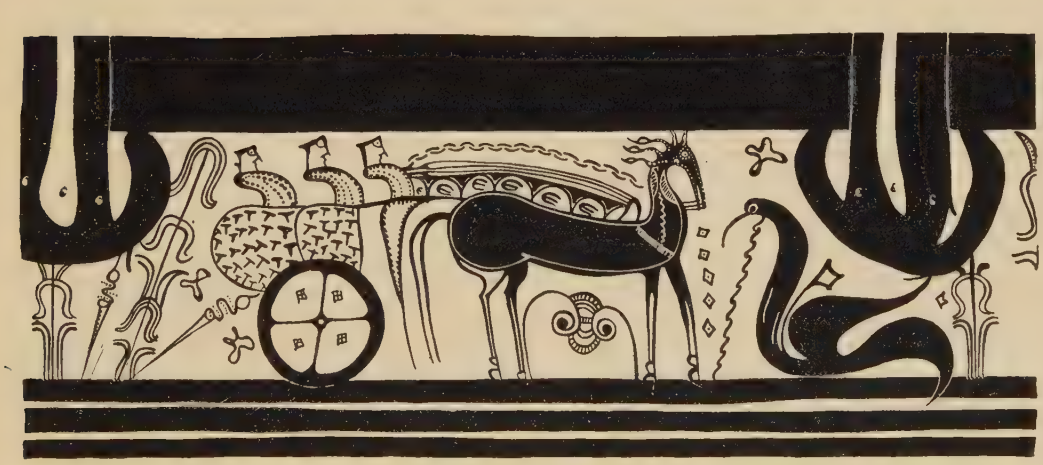

Fig. 3.—Panneau B du Cratère de Ras Shamra.

l'allongement et la minceur des jambes largement écartées, la façon curieuse dont est dessiné le galbe de la hanche ou le cou démesurément long permettent de reconnaître l'école à laquelle notre peintre s'était formé : l'école mycénienne dont les traditions plongent dans l'art minoen. Pour s'en convaincre il suffit de comparer le dessin de ce personnage à celui des guerriers qui précèdent un char sur le fragment de vase bien connu trouvé par Schliemann à Tirynthe,[1] fig. 4, et à celui des pêcheurs sur le support de lampe ou tuyau à libation de Phylakopi,[2] fig. 5, d'un siècle environ plus ancien.

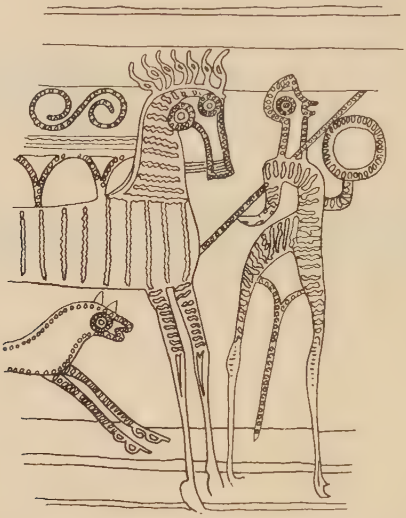

Fig. 4.—Détail d'un Cratère Mycénien à Figuration de Char de Tirynthe. (D'après H. Schliemann, *Tirynthe*, Paris, 1885, pl. XIV.)

Enfin la technique de la retouche blanche avec laquelle les détails de harnachement sont figurés sur le corps foncé du cheval dérive sans doute du procédé similaire appliqué par les céramistes minoens.[3]

Les deux scènes du décor. Le décor peint du vase comprend deux chars, disposés de façon à occuper chacun le centre des deux panneaux principaux du vase, délimités par les anses. Pour la commodité de la discussion nous les désignerons ici comme panneau A et B.

Le panneau A. Le panneau A, fig. 2, représente un char à deux roues dont l'une seulement est figurée, par convention de profil absolu. La roue

[1] Henri Schliemann, *Tirynthe*, Paris, 1885, pl. XIV, d'où est tirée notre fig.

[2] Cf. Edgar dans *Excavations at Phylakopi in Melos*, suppl. paper no. 4, *The Society for the Promotion of Hell. Studies*, London, 1904, pl. xxii, d'où est extraite notre fig.

[3] Cf. E. J. Forsdyke, *Minoan pottery from Cyprus*, dans *JHS* XXXI, et notre *Ugaritica* I p. 98.

a quatre rayons minces. L'essieu est marqué par le point central dans le cercle ménagé en réserve au centre de la roue. La minceur des rayons contraste avec la largeur de la jante qui devait cependant être assez étroite, vu la légèreté du char. Dans le vide entre les rayons un motif de remplissage en forme de carré croisillonné est répété quatre fois.

Comme sur les chars minoens [1] et mycéniens, la caisse est divisée en deux parties: la caisse proprement dite et l'annexe dont la partie arrière, arrondie, déborde largement la roue. Les faces latérales sont couverts d'un motif formant un semis de T disposés en lignes irrégulières. Il imite soit une peinture ou une garniture en tissu, cuir ou peau, soit un revêtement en vannerie.[2]

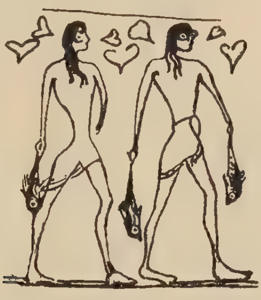

Fig. 5.—Pêcheurs Figurés sur un Tuyau en Terre Cuite de Phylakopi.
(D'après C. C. Edgar dans *Excavations at Phylakopi in Melos*, Suppl. paper no. 4, Society for Promotion of Hellenic Studies, London, 1904, pl. XXII.)

De cette caisse, deux personnages émergent, le torse bombé, vêtus d'une sorte de manteau ou tunique couvert de points, façon conventionnelle d'indiquer probablement un tissu en grosse laine. Le fragment d'un autre cratère, également de Ras Shamra, fig. 6, montre ce costume en entier. Les têtes sont fortement schématisées selon l'habitude des peintres céramistes: un trait vertical pour indiquer le front et le nez, un trait oblique pour le haut de la tête, la chevelure marquée par une légère ondulation, un autre trait oblique pour la bouche et le menton, deux traits verticaux incurvés pour le long cou. L'œil est figuré par un demi cercle avec point central.

Les bras du personnage arrière ne sont pas représentés. Ceux du personnage avant, qui est le cocher, saisissent les guides qui semblent être au nombre de quatre et qui rejoignent le passe-guides. La quatrième guide, celle du dessous que l'artiste a figuré la plus proche du dos du cheval se confond avec la bande décorative ornée d'arcades dont les extrémités touchent la barre du timon et de laquelle nous traiterons plus loin.

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[1] Sir Arthur Evans, *The palace of Minos* IV, p. 821.

[2] Voir les caisses à panneaux garnis de vannerie dans: Sir Arthur Evans, *loc. cit.* IV, figs. 796 et 799.

Une liaison supplémentaire entre le cocher et les chevaux est établie par une sorte de torsade à deux brins au-dessus du faisceau des guides et qui dans les scènes analogues sur certains autres cratères mycéniens est remplacée par une ligne de chevrons. Nous en parlerons dans le paragraphe consacré au char du panneau B. Une torsade analogue est peinte verticalement du côté gauche du panneau entre les deux motifs décoratifs qui sont probablement d'origine florale, encore que leur schématisation ne permette pas de dire s'ils dérivent du motif du palmier ou de celui du lys ou même de celui de la poulpe, chers aux céramistes minoens et mycéniens.

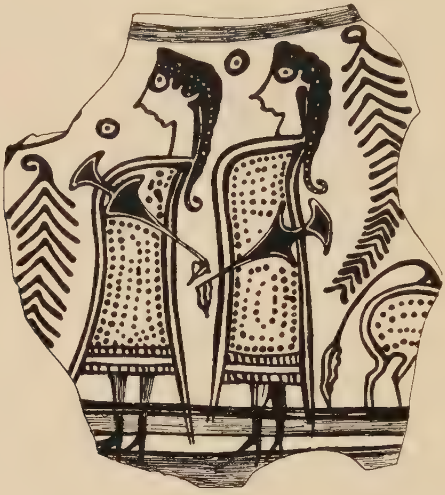

Fig. 6.—Fragment de Cratère Mycénien Peint de Ras Shamra.
(D'après un dessin de Georges Chenet.)

Les détails de l'attelage étant mieux conservés sur le panneau B, nous renvoyons leur description au paragraphe suivant.

Le personnage debout au torse renversé qui précède l'attelage tient dans sa main gauche rejetée en arrière une baguette mince avec laquelle il semble jouer.[1] Son costume diffère de celui des personnages montés sur le char. Le peintre l'a indiqué par une teinte uniforme, la même que celle qui couvre le corps du cheval. Il revêt le personnage depuis les pieds jusqu'à la naissance du cou et se présente ainsi comme une sorte de maillot moulant le corps, à moins que le personnage ne soit nu et son corps simplement teinté.

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[1] Sur d'autres scènes du même type ce personnage remplit de toute évidence le rôle d'un écuyer.

Le panneau B. Du côté opposé du cratère, le panneau B figure un char du même type, mais qui est monté de trois personnages au lieu de deux, fig. 3. Comme sur le dessin ils ne tiennent pas tous dans le char, le peintre a représenté le cocher en avant de la caisse, émergeant de la barre qui figure en réalité le timon.

Le raccord du timon avec le char n'est pas très clair sur le dessin, comme c'est d'ailleurs le cas pour ce détail sur la plupart des cratères à représentation similaire. On a l'impression que le peintre ignorait la construction précise du char et qu' il avait copié son dessin sur un modèle qui lui aussi sur ce point n'était plus exact. Peut-être aussi y avait-il ici l'application de conventions de dessin. De toute évidence le char représenté appartient au type C de la classification proposée par Sir Arthur Evans,[1] où le timon, rejoignant normalement le plancher qui repose sur l'essieu, a son extrémité antérieure reliée au parapet avant de la caisse au moyen d'un étai. Pour assujettir le tout, étai et timon sont rendus solidaires sur toute leur longueur par des lanières, formant ainsi un triangle indéformable et cependant un peu élastique. Ces lanières, en cuir ou en vannerie, sont disposées en forme d'arcades d'un effet décoratif très heureux comme le montrent fort bien les chars gravés sur la perle de la tombe de Vaphio, fig. 7 et sur les tablettes de Cnosse, fig. 8.

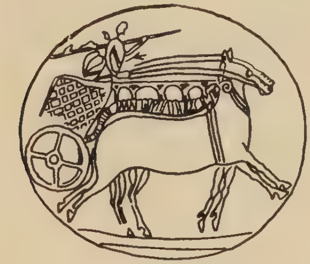

Fig. 7.—Char avec Timon et Étai Renforcés par Ligature. Perle Gravée. Tombe de Vaphio.

(D'après Sir Arthur Evans, *Palace of Minos*, IV, p. 820.)

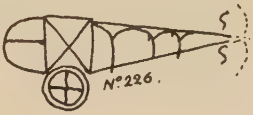

Fig. 8.—Char avec Timon et Étai Réunis par Ligature. Tablette de Cnosse.

(D'après Sir Arthur Evans, *Palace of Minos*, IV, p. 821.)

Erreurs du peintre. Sur notre cratère, le peintre a fait aboutir l'extrémité postérieure de l'étai au milieu du torse du conducteur au lieu de la mener jusqu' au parapet de la caisse. En outre il a confondu étai et timon. Il n'est pas impossible que la bande triangulaire qui, en avant de la caisse, tombe vers le bas (et qui sur le panneau A, fig. 2, touche la roue) ne soit une réminiscence de la base courbe du timon qui devait rejoindre ici le plancher du char.

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[1] Sir Arthur Evans, *loc. cit.* IV p. 821.

La façon dont le peintre a figuré le détail du harnais n'est pas non plus tout à fait claire. Les quatre guides, dont l'inférieure se confond avec l'étai, aboutissent bien au passe-guides qui forme une grosse boucle. Mais à partir de là, aucune liaison n'est indiquée avec les mors. La présence du mors est attestée par trois traits qui peuvent être ou bien l'extrémité des guides ou de fausses-rênes. Dans ce dernier cas, au lieu de considérer l'interruption des guides entre le passe-guides et les mors comme une erreur du peintre, on pourrait admettre qu' elle fut volontaire. Alors les guides, comme pour l'attelage de la patère en or de Ras Shamra,[1]

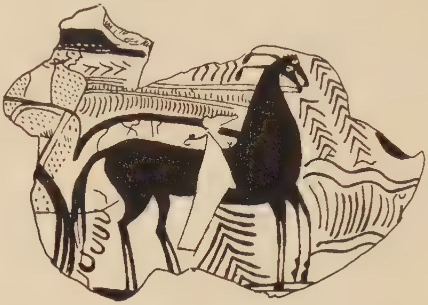

FIG. 9.—DÉTAIL D'UN CRATÈRE À FIGURATION DE CHAR D'ENKOMI.
(D'après *Catalogue of Greek Vases*, British Museum, I, (II), fig. 114.)

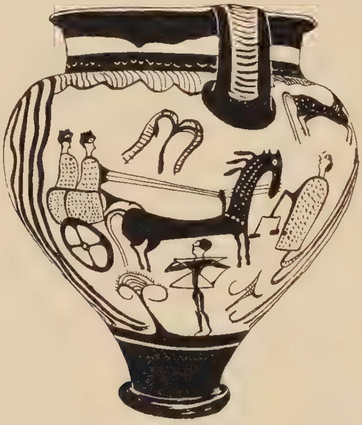

FIG. 10.—CRATÈRE MYCÉNIEN À FIGURATION DE CHAR D'ENKOMI.
(D'après E. Gjerstad, J. Lindros, E. Sjogvist et A. Westholm, *The Swedish Cyprus Expedition*, pl. CXX.)

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[1] Claude F. A. Schaeffer, *Contribution à l'étude de l'attelage sumérien et syrien aux III*e *et II*e *millénaires*, dans *Préhistoire* VI, 1938, p. 58.

plutôt que de servir à la conduite, auraient fournis un point d'appui au conducteur et aidé à garder l'équilibre. Dans ce cas les chevaux spécialement dressés comme nous l'avions admis pour ceux des chars de course syriens, devaient réagir à la parole, ce qui d'ailleurs avait pu être indiqué symboliquement par le peintre au moyen de la torsade figurée au-dessus des guides. Il n'est pas interdit de supposer aussi qu'il s'agit ici d'une longe d'arrêt comme sur les chars assyriens.[1]

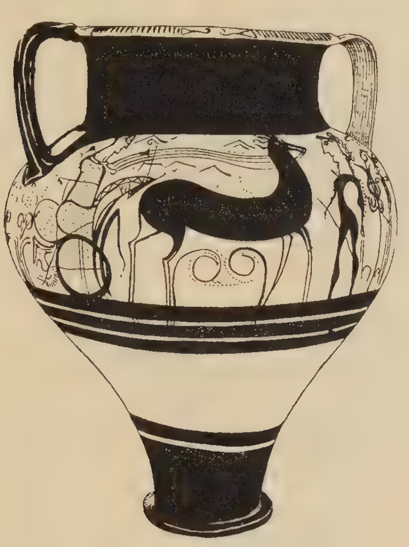

FIG. 11.—CRATÈRE À FIGURATION DE CHAR D'ENKOMI.

(D'Après E. Gjerstad, J. Lindros, E. Sjogvist, et A. Westholm, *The Swedish Cyprus Expedition*, I, pl. CXXI.)

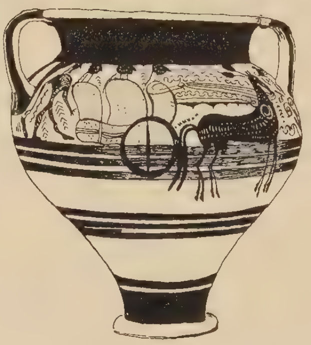

FIG. 12.—CRATÈRE MYCÉNIEN À FIGURATION DE CHAR, D'ENKOMI.

(D'après A. S. Murray, *Excavations in Cyprus*, fig. 75.)

Mais nous nous rangeons plutôt à la première hypothèse, celle d'une erreur de notre peintre qui sur son dessin a oublié de relier les guides avec les rênes à partir du passe-guides. En effet, sur la plupart des scènes analogues que l'on voit sur les autres cratères mycéniens jusqu' ici connus, cette liaison est marquée, fig. 9–13.

Artifices du dessin. Sur notre dessin, l'extrémité du museau du cheval présente une fente. Au premier abord on pourrait admettre que l'artiste avait figuré la bête la bouche ouverte. Mais il me paraît plus probable qu'il avait voulu de cette façon indiquer conventionnellement les têtes des deux chevaux dont se compose l'attelage. Pour la même raison il a figuré deux yeux, chacun étant l'œil droit des deux têtes de l'attelage, vues de profil.[1]

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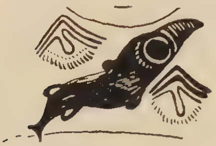
[1] Cf. à ce sujet la disposition du harnais assyrien du temps d'Assurbanipal observée par J. Gadd, *Assyrian sculpture*, 1934, p. 34. Ici les six rênes tenues par le cocher ne sont pas reliées aux mors, mais simplement fixées au joug. Une seule longe est à l'avant du char.

La ligne blanche tracée par l'artiste parallèlement au contour intérieur du corps du cheval sert à mon avis le même but; elle donne l'illusion à l'œil de voir les corps des deux chevaux avec un profil décalé, artifice habile quoique inexact. La preuve que tel était bien le but de cette ligne, c'est que l'artiste a figuré le collier à l'intérieur de la silhouette délimitée par le trait blanc, de façon à marquer ainsi que cette pièce de harnachement ceinture le poitrail et l'épaule du cheval de droite.



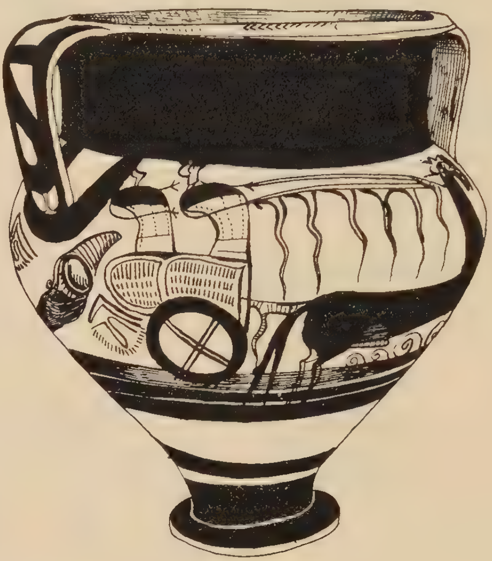


FIG. 13.—CRATÈRE MYCÉNIEN À FIGURATION DE CHAR ET DÉTAIL, ENKOMI.

(D'après E. Gjerstad, J. Lindros, E. Sjogvist et A. Westholm, *The Swedish Cyprus Expedition*, pl. CXXI.)

De ce collier une ligne ondulée monte verticalement vers le haut de l'encolure. Elle à l'apparence d'une fausse-rêne accentuant l'attitude relevée de la bête, bien qu' il paraisse insolite de la figurer sous cette forme en zigzags au lieu d'une simple ligne droite, comme sur d'autres représentations du même genre.[2] Elle rejoint deux motifs hachurés, en demi-lune, dont je ne saurais expliquer la signification. La crinière est diviseé en trois touffes suivant le type habituellement figuré sur les monuments minoens [3] et mycéniens.[4]

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[1] Cf. à ce sujet l'observation de Sir Arthur Evans dans *Palace of Minos* IV, p. 374, à propos des 'two-eyed profiles,' explication qui, à mon avis, ne s'applique pas aux chevaux figurés sur les cratères mycéniens.

[2] Cf. notre volume *Ugaritica* I fig. 93.

[3] Sir Arthur Evans, *loc. cit.* IV p. 827, fig. 805 et p. 829, figs. 810 et 811.

[4] Cf. notre note sur l'attelage syrien etc., p. 56.

Il faut souligner l'absence de sangle dans le harnais. Cet organe essentiel de l'appareil de traction était cependant connu à cette époque, aussi bien en Crète et dans le monde mycénien qu'en Égypte et en Syrie.[1] Je ne crois pas qu'il s'agisse là d'un retour au harnais primitif dépourvu de sangle tel que l'employaient les anciens Sumériens.[2] J'admettrais plus volontiers, là-aussi, un oubli ou l'ignorance du peintre.

Notons encore que la façon de réserver en blanc la surface de la jambe postérieure gauche du cheval est intentionnelle; elle indique la partie intérieure de la jambe qui est plus claire que le côté extérieur. De cette observation les artistes ont su tirer profit de bonne heure pour différencier conventionnellement les paires de pattes de l'attelage.[3]

Dans le vide sous le ventre et les jambes des chevaux est peint un motif mycénien courant, probablement une fleur stylisée. Derrière la roue du char un autre motif décoratif est placé, d'origine animale celui-ci, dérivant d'une coquille marine (famille des tritons?), très usuel lui aussi dans la peinture céramique mycénienne.

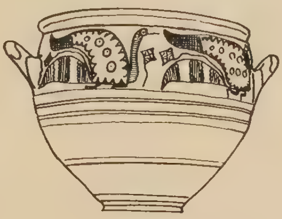

Fig. 14.—Cratère Mycénien Peint d'Enkomi.
(D'après A. S. Murray, A. H. Smith and H. B. Walters, *Excavations in Cyprus*, London, 1900, fig. 73.)

L'oiseau capturé et ligoté. Mais le principal sujet du panneau B, en dehors du char, est le grand oiseau à long cou et bec crochu qui fait face à l'attelage et dont le corps est habilement logé dans l'intervalle au-dessous de l'anse. L'oiseau est couché sur le ventre ou posé sur l'eau, car on ne voit pas ses pattes, à moins qu'une ligne légèrement incurvée se terminant en une sorte d'élargissement à trois pointes, entre le cou et l'aile, ne figure l'une des pattes curieusement levée. Sur un cratère mycénien d'Enkomi, ce motif paraît définitivement représenter une fleur, fig. 14.

L'identification de l'oiseau présente des difficultés. La forme du cou et des ailes et l'arrondi de la poitrine tiennent du cygne, de l'échassier ou de l'autruche, la forme du bec plutôt de l'ibis. Quant aux dimensions de l'oiseau, celui-ci debout, à moins d'admettre une grossière erreur de proportion de la part du peintre, devait égaler sinon dépasser la hauteur du cheval figuré en face de lui. Cela fait encore penser à une autruche. Cet oiseau ne vivait pas à l'état sauvage dans les pays égéens et mycéniens, mais il a dû y être connu, car on faisait un usage assez fréquent de ses œufs et de ses plumes.[1] Si l'intention de l'artiste était vraiment de figurer une autruche, ce qui reste, je le répète, une hypothèse, alors on peut présumer qu'il devait la peindre d'après des descriptions ou en suivant sa propre fantaisie, car il n'avait probablement jamais vu cette bête. Cela expliquerait les défauts de ressemblance.[2]

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[1] Cf. notre note sur l'attelage syrien, etc., p. 56.

[2] Schaeffer, *loc. cit.* p. 55.

[3] Cf. p. ex. l'attelage du char de Ramsès II. En avant de l'attelage, un oiseau de proie (faucon?) vole à tire d'aile, comme on le voit généralement sur les peintures ou bas-reliefs égyptiens figurant le pharaon à la chasse. (Champollion-le-Jeune, *Monuments de l'Égypte et de la Nubie*, I, pl. 13).

Mais il se peut aussi que le grand oiseau dont les marchands de Syrie ou les Mycéniens venant d'Orient et d'Égypte apportaient les œufs énormes et les superbes plumes était devenu dès cette époque dans l'imagination populaire un animal mi réel, mi légendaire qui plus tard chez les Assyriens semble parfois avoir été considéré comme un dragon[3] et que les Prophètes eux aussi rangent volontiers parmi les animaux peuplant les lieux maudits de Dieu.[4]

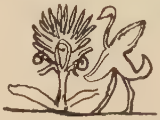

FIG. 15.—GRAND OISEAU, RESSEMBLANT À UNE AUTRUCHE.
DÉTAIL D'UN CYLINDRE EN PÂTE BLEUE DE RAS SHAMRA.

Ainsi la scène sur le panneau B peut fort bien faire allusion à un épisode emprunté à quelque récit légendaire d'un combat entre des héros et un oiseau énorme, ou représenter la chasse à cet oiseau de proportions fantastiques. Comme le confirme la glyptique minoenne et mycénienne le monde méditerranéen dès le II^e^ millénaire, et sans doute auparavant, était peuplé de nombreux héros et de monstres ainsi que c'était le cas aussi en Orient dès le III^e^ millénaire.[5] Des histoires et des récits épiques y circulaient, relatant des combats ou des aventures diverses, entre dieux, héros et monstres ; elles furent même déjà conservées par écrit, comme les poèmes mythiques découverts par nous à Ras Shamra le confirment.

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[1] Sur l'utilisation des œufs et plumes d'autruche, cf. les nombreuses indications données par Sir Arthur Evans, *Palace of Minos*, index volume, *s.v.* ostrich.

[2] La représentation de l'autruche dans l'art oriental et dans la glyptique est assez rare, surtout aux hautes époques. Nous n'avons trouvé parmi les nombreux cylindres de Ras Shamra qu'un seul qui figure un oiseau de grande taille ressemblant à l'autruche, fig. 15. Cf. les exemples plus tardifs, la plupart assyriens, réunis par W. H. Ward, *The Seal cylinders*, Washington, 1910, figs. 587, 595 et 687.

[3] W. H. Ward, *loc. cit.* p. 203. H. Frankfort, *Cylinder seals*, London, 1939, p. 203.

[4] F. Vigouroux, *Dictionnaire de la Bible*, I, col. 1280, *s.v.* autruche.

[5] Preuve : l'épopée de Gilgamesh, p. ex.

J'arrive donc à penser que la scène figurée sur le cratère de Ras Shamra n'est pas simplement la représentation d'un char de course entouré de motifs décoratifs sans lien avec le sujet central, mais plutôt l'image illustrant une pensée, une histoire ou une légende.

Cette hypothèse me paraît corroborée par le fait que le grand oiseau vers lequel avance le char sur le panneau B porte attaché au cou, juste derrière la tête, c'est-à-dire à l'endroit le plus propice, une corde, une chaîne[1] ou une tresse solide. Elle réjoint en ligne droite, comme si elle était tendue, le sol sur lequel est couché l'oiseau,[2] fig. 3.

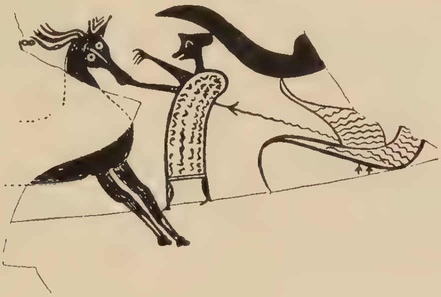

Fig. 16.—Détail d'un Cratère à Figuration de Char. Ras Shamra. Tombe IV de Minet-el-Beida.

L'oiseau est dont attaché, capturé ou ligoté. Capturé et vaincu au cours d'une chasse[3] par les personnages montés sur le char devant lui, ou ligoté après une lutte par les héros qui s'étaient aventurés avec leux char dans les pays lointains où vivent ces grands oiseaux fantastiques. La chasse au désert ou dans les steppes qui le bordent, où seule la poursuite en char pouvait être pratiquée,[1] en raison des vastes terrains plats et dégagés qu'elle exige, était devenue le sport préféré des grands à partir du milieu du II^e millénaire. Les artistes, aussi bien en Égypte que dans l'Egée, à Mycènes et en Syrie, en faisaient l'un de leurs sujets favoris. Ils la peignaient sur les fresques [2] et la copiaient sur les vases, la figuraient en bas-relief ou la gravaient sur l'or et l'ivoire.

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[1] Des chaînes, il est vrai, assez fines en général et servant à la parure, étaient connues dans l'Égée dès le début du III^{e} millénaire ; cf. par exemple les chaînes en or de Mochlos du minoen ancien II (Sir Arthur Evans, *Palace of Minos* I fig. 69). Ce n'est apparemment qu'à partir du premier millénaire, notamment chez les Assyriens, que la chaîne fut utilisée pour lier les prisonniers. Sur la chaîne dans la Bible ; cf. F. Vigouroux, *loc. cit.* II, col. 480 et suiv.

[2] Le même sujet est apparemment figuré sur le cratère à char de la tombe IV de Ras Shamra, fig. 16, dont pourtant le dessin est moins précis, surtout en ce qui concerne les détails du harnachement et du char. Dans l'espace ménagé au-dessous d'une anse est figuré un grand oiseau, malheureusement incomplet par suite d'une cassure. Il est couché comme celui du cratère que nous étudions, mais ici l'artiste a figuré sous le ventre des rudiments de pattes. Une ligne ondulée part de la base de l'aile relevée, va droit vers le personnage debout tenant les chevaux et l'atteint dans le dos où elle se termine en forme de pointe de flèche. On pourrait admettre que le peintre n'a plus compris le but de cette ligne et ne s'était plus que vaguement souvenu d'une relation entre l'oiseau et le personnage. Le fait que celui-ci porte un autre costume que l'écuyer et est vêtu comme les personnages montés sur le char sur notre cratère, pourrait faire penser aussi qu'il s'agit là de la représentation d'une autre scène du même épisode : un des occupants du char serait descendu et ramènerait en laisse l'oiseau capturé.

[3] La chasse à l'autruche, pratiquée encore aujourd'hui dans le désert syrien par les

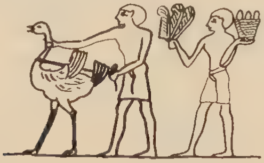
FIG. 17.—AUTRUCHE PRISE À LA CHASSE, PLUMES ET OEUFS. THÈBES.

(D'après Sir J. Gardner Wilkinson, *The Ancient Egyptians*, vol. II, fig. 376.)

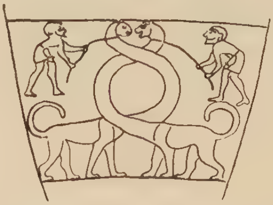
FIG. 18.—DÉTAIL DE LA PALETTE EN SCHISTE DE NARMER, MUSÉE DU CAIRE.

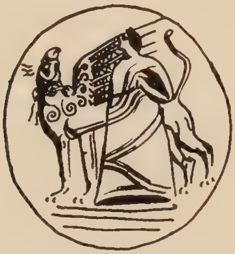
FIG. 19.—PERSONNAGE (PRÊTRE?) TENANT GRIFFON EN LAISSE. INTAILLE. TOMBE DE VAPHIO.

(D'après Sir Arthur Evans, *Palace of Minos*, IV, p. 412.)

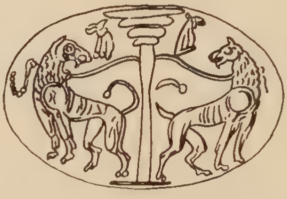
FIG. 20.—LIONS ATTACHÉS. MYCÈNES. BAGUE AVEC CACHET EN OR.

(D'après Sir Arthur Evans, *Palace of Minos*, IV, p. 610.)

Non moins répandues dans la mythologie méditerranéenne, égyptienne

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nomades (cf. Carl R. Raswan, *Mœurs et coutumes des Bédouins*, Paris 1936, p. 62 et suiv.), l'était déjà dès une époque reculée; cf. les figurations sur les monuments égyptiens (notre fig. 17) et notamment celle de la tombe de Toutankh Amon, cf. H. Carter, *The Tomb of Tutankh Amen*, vol. II, pl. LXII, A.

[1] cf. nos observations dans *Contribution à l'étude de l'attelage sumérien et syrien* p. 58, et dans *The Cuneiform texts of Ras Shamra-Ugarit*, London, 1939, p. 33 et suiv.

[2] Sur l'influence des fresques sur la peinture céramique à l'époque mycénienne, cf. E. J. Forsdyke, *loc. cit.* in *Essays in Aegean Arch.*, p. 30.

et orientale dès les plus hautes époques étaient les représentations figurées de monstres ou d'animaux sauvages capturés et ligotés, attachés ou tenus en laisse.[1] Nous en avons réuni un choix très restreint sur les figures 18 à 25 depuis les célèbres monstres figurés sur la palette en schiste de Narmer, de la fin du quatrième millénaire, jusqu' aux griffons ou lions gravés sur les cachets mycéniens et les cylindres de Ras Shamra des XIV^e^–XIII^e^ siècles.[2]

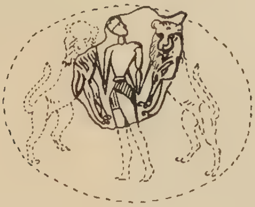

FIG. 21.—LIONS TENUS EN LAISSE. IMPRESSION DE CACHET, CNOSSE.

(D'après Sir Arthur Evans, *Palace of Minos*, IV, p. 608.)

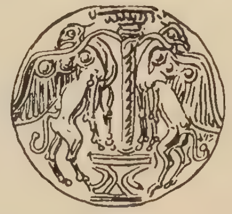

FIG. 22.—GRIFFONS AILÉS ATTACHÉS À UNE COLONNE. MYCÈNES. INTAILLE.

(D'après Sir Arthur Evans, *Palace of Minos*, III, p. 511.)

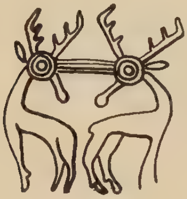

FIG. 23.—CERFS LIÉS ENSEMBLES PAR UNE DOUBLE CORDE. DÉTAIL D'UN CYLINDRE EN PÂTE BLEUE DE RAS SHAMRA.

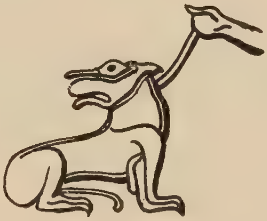

FIG. 24.—LION TENU EN LAISSE. DÉTAIL D'UN CYLINDRE EN HÉMATITE DE RAS SHAMRA.

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[1] cf. aussi à ce sujet: A. Merlin et L. Poinssot, *Deux mosaïques de Tunis à sujets prophylactiques*, in Fondation E. Piot, *Monuments et Mémoires* XXXIV, 1934, p. 167, et la bibliographie réunie par ces auteurs.

[2] Cette liste n'a pas la prétention d'être complète; elle ne vise qu'à présenter un certain nombre de monuments figurant le sujet du monstre ou de l'animal sauvage ligoté ou attaché et appartenant à l'époque du cratère de Ras Shamra ainsi que quelques monuments analogues plus anciens. Nous y ajoutons fig. 26 la reproduction d'un tesson de jarre qui montre deux grands oiseaux—peut-être des échassiers ou des autruches—de part et d'autre d'une double ligne ondulée dont l'extrémité n'est pas conservée. Il peut s'agir de deux oiseaux accostés à l'arbre sacré, ou tenant des vers dans leur bec, ou attachés à une corde comme l'oiseau du cratère de Ras Shamra. Sur un anneau d'or trouvé lors des fouilles près du Théseion à Athènes est figuré un personnage ou un monstre à corps

D'autre part l'histoire de la déesse Anat, révélée par les textes de Ras Shamra, nous montre que dès le milieu du deuxième millénaire il circulait à Ugarit, port méditerranéen, des légendes où l'on voyait une déesse se mettre à la recherche d'un trésor d'or, caché quelque part dans un pays lointain et défendu par un dragon, le monstre marin Tannîn, que la déesse va museler ou ligoter—sans le tuer—pour lui arracher l'or.

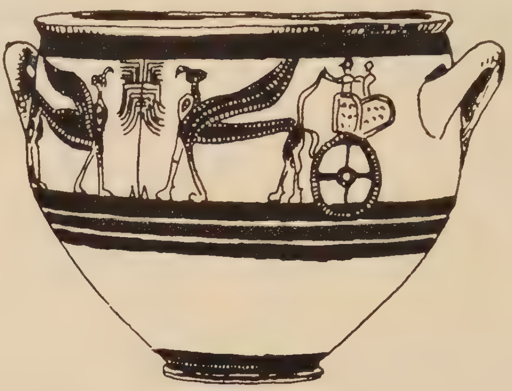

Fig. 25.—Vase Mycénien avec Figuration de Char Tiré par un Attelage de Griffons Ailés, d'Enkomi.
(D'après A. S. Murray, *Excavations in Cyprus*, fig. 135*a*.)

Je ne prétends nullement que la scène représentée sur le cratère mycénien de Ras Shamra figure cette aventure particulière de la conquête de l'or du Saphôn. Rien n'est plus éloigné de ma pensée. Je me rends parfaitement compte aussi de la fragilité de toute cette construction

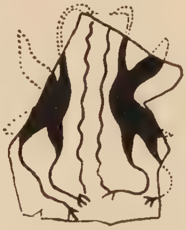

Fig. 26.—Fragment de Jar du ' Spring-Chamber ' de Cnosse.
(D'après Sir Arthur Evans, *Palace of Minos*, II, p. 137.)

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humain et tête d'animal qui tient (?) l'extrémité d'une tresse à laquelle semble être attachée la première des deux femmes en robe crétoise représentées sur la même scène. Il se peut aussi que ce soit la femme ou déesse qui retient en laisse le monstre; cf. J. Charbonneaux, *Bulletin archéologique*, dans *Revue des Études Grecques* XLVIII, 1935, p. 83, fig. 2.

d'hypothèses, échafaudée à propos de la signification de la scène figurée sur notre cratère. Ce que j'ai voulu simplement dire, c'est qu'elle peut être l'expression d'une légende ou d'une histoire réelle qui peuplait l'imagination populaire de cette époque. Les peintres céramiques des cratères mycéniens seraient ainsi les prédécesseurs des peintres de vases attiques dont l'imagerie enchantait les Grecs quelques siècles plus tard.

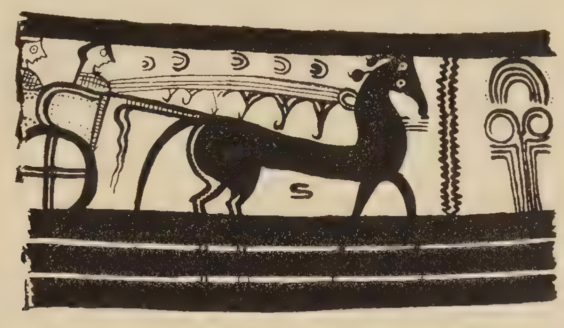

Fig. 27.—Détail d'un Cratère à Figuration de Char de Klavdia (Chypre). (D'après *Catalogue of Greek Vases*, British Museum, I, part II, fig. 136.)

Utilisation des cratères. Une objection parmi d'autres que l'on pourrait élever contre cette hypothèse est celle qui voit dans ces cratères à char mycénien ou égéo-mycéniens des vases exclusivement funéraires dont le décor serait en rapport avec cette destination et pourrait figurer le transport du mort dans l'au-delà, comme sur certains vases géométriques du Dipylon. Cette objection ne me paraît pas fondée. Certes la plupart des vases de ce type ont été retirés de tombeaux en Chypre. Mais c'est qu'en Chypre, particulièrement à Enkomi d'où provient le plus grand nombre des cratères à représentations figurées, on n'a précisément fouillé jusqu'ici que le

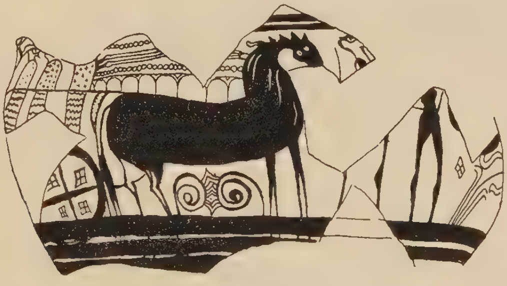

Fig. 28.—Détail d'un Cratère à Figuration de Char, d'Enkomi. (D'après *Catalogue of Greek Vases*, British Museum, I, (II), fig. 116.)

cimetière, et pas encore la ville dont dépendait cette vaste nécropole. Sa présence a depuis été repérée par moi.[1] Le jour où l'on dégagera la ville, peut-être constatera-t-on que les cratères à figurations de chars ont été utilisés aussi pour des usages autres que funéraires. C'était le cas à Ugarit, où la plupart des cratères à représentation de char, en particulier celui que nous présentons ici ont été trouvés, à l'exception de deux, non pas dans des tombeaux, mais parmi les ruines d'habitations.

Possibilités d'identifications des peintres de vases? Est-il possible grâce à des particularités de leur technique, d'identifier les peintres qui ont exécuté le décor de ces beaux cratères? La façon dont les détails du dessin sont réalisés doit en effet être personnelle à certains artistes. Ainsi il me paraît évident que le décor du cratère de Ras Shamra présenté ici est d'un peintre différent et supérieur à celui qui exécuta le cratère de la tombe IV de Ras Shamra, par exemple (fig. 16). Il se distingue encore de l'auteur du cratère, fig. 6. Il suffit pour cela de noter la différence d'interprétation du profil humain sur les vases en question. A vrai dire en confrontant les divers cratères figurés dans cette étude à titre comparatif, figs. 4, 6, 9–13, 27–36, nous nous apercevons qu'il y a autant de

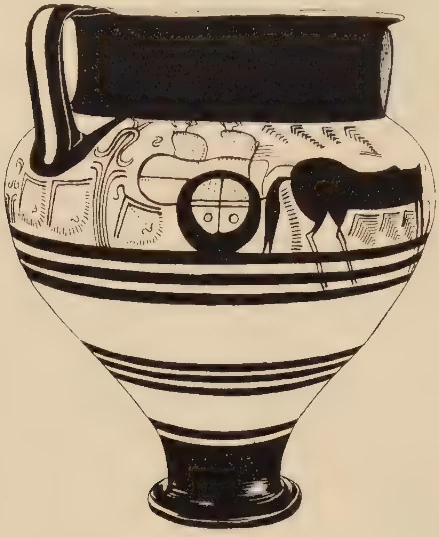

FIG. 29.—CRATÈRE MYCÉNIEN À FIGURATION DE CHAR D'ENKOMI.

(D'après E. Gjerstad, J. Lindros, E. Sjogvist et A. Westholm, *The Swedish Cyprus Expedition*, I, pl. CXXI.)

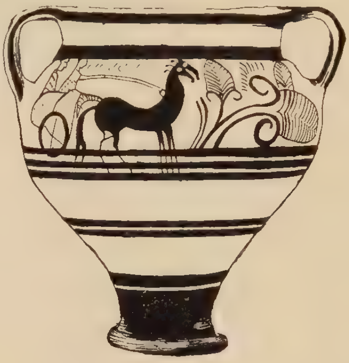

FIG. 30.—CRATÈRE MYCÉNIEN À FIGURATION DE CHAR D'ENKOMI.

(D'après A. S. Murray, *Excavations in Cyprus*, fig. 71.)

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[1] Cf. notre volume *Missions en Chypre*, p. 83 et suiv.

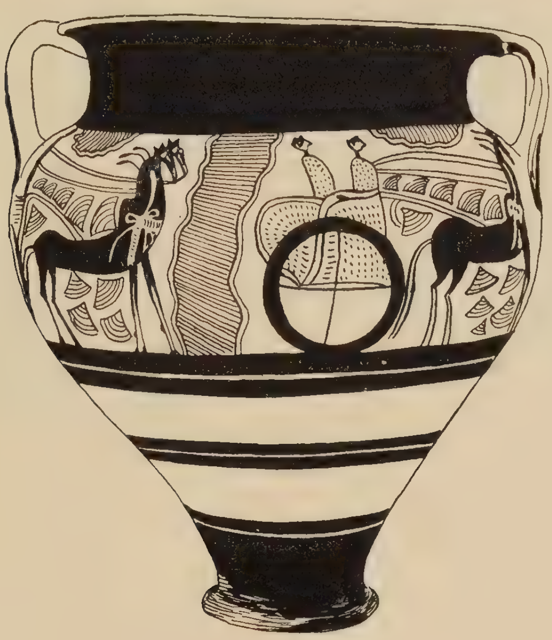

Fig. 31.—Cratère Mycénien à Figuration de Char de Chypre.
(D'après J. L. Myres, *Handbook of Cesnola Collection*, p. 48.)

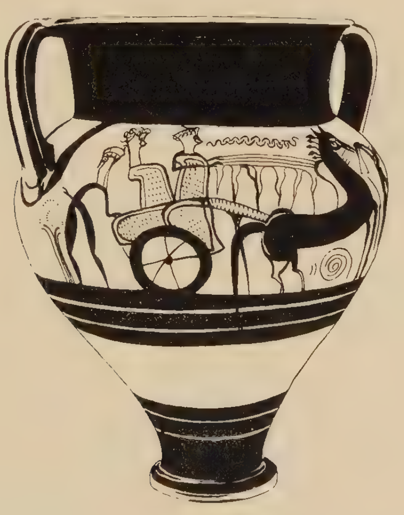

Fig. 32.—Cratère Mycénien à Figuration de Char d'Enkomi.
(D'après E. Gjerstad, J. Lindros, E. Sjogvist, A. Westholm, *The Swedish Cyprus Expedition*, I, pl. CXX.)

peintres différents que de vases. Mais évidemment, avant de conclure définitivement, il faudra élargir l'enquête et confronter à l'aide de dessins fidèles ou de bonnes photographies l'ensemble des cratères à figuration de char trouvés dans la Grèce mycénienne, à Rhodes, à Chypre et en Syrie.

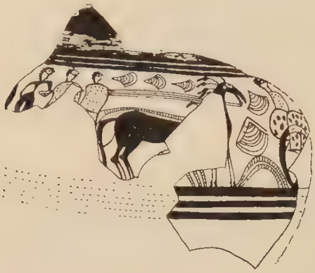

Fig. 33.—Détail de Cratère à Figuration de Char d'Enkomi.

(D'après *Catalogue of Greek Vases*, British Museum, I (II), fig. 113.)

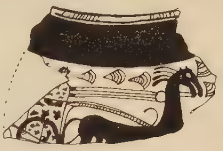

Fig. 34.—Détail de Cratère à Figuration de Char d'Enkomi.

(D'après *Catalogue of Greek Vases*, British Museum, I (II), fig. 115.)

Pour autant que je puisse voir d'après le matériel que je connais personnellement il me paraît cependant plus probable que nous devons nous attendre à trouver ici moins des individualités de peintres que certaines écoles ou ateliers dont les œuvres montrent une parenté entre elles. Cela serait déjà très important pour la question chronologique et l'étude des courants commerciaux aux temps mycéniens.

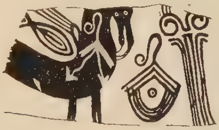

Fig. 35.—Détail de Cratère à Figuration de Char d'Enkomi.

(D'après *Catalogue of Greek Vases*, British Museum, I (II), fig. 117.)

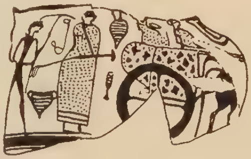

Fig. 36.—Fragment de Cratère Mycénien à Figuration de Char d'Enkomi.

(D'après A. S. Murray, A. H. Smith and H. B. Walters, *Excavations in Cyprus*, fig. 65.)

A cette époque la production artistique n'était pas encore basée sur des personnalités d'artistes. Elle reposait sur des corporations ou des ateliers où elle naissait entre les mains d'habiles ouvriers. C'est la caractéristique de l'art aux hautes époques. Il était réservé à des civilisations plus tardives de faire sortir de cette masse anonyme d'artisans des individualités dont les œuvres ont été appréciés par une élite d'amateurs, fruit d'une civilisation raffinée eux aussi. Or il me semble que ce stade n'était pas encore atteint aux temps mycéniens où les œuvres d'art ne paraissent jamais avoir été signées.

Marque de potier. A ce propos il faut soigneusement examiner les marques sous les pieds des vases peints de l'époque mycénienne. C'est avant cuisson que ces marques ont été appliquées au pinceau avec une couleur rouge analogue à celle employée pour le décor des vases. Il s'agit donc certainement de marques de potier. Les marques représentant parfois, mais pas toujours, des caractères de l'alphabet chypriote, se retrouvent aussi bien sous le pied des vases figurés que sur les vases à décor géométrique. Cela prouve à mon avis qu'il s'agit ici moins d'une indication individuelle de peintre que de marques distinctives de potier ou même d'atelier. Là aussi s'ouvre un vaste champ d'investigations pour le chercheur qui voudra relever la totalité des marques de ce genre (à distinguer des marques gravées après cuisson sur les anses) et étudier leur présence sur les différents types de vases mycéniens ainsi que leur répartition géographique. La première liste donnée par nous dans *Missions en Chypre* en 1936, puis celle plus complète de Stanley Casson, dans *Ancient Cyprus*, peuvent être considérées comme un point de départ. Mais d'autres signes se trouvent certainement sur les nombreux vases mycéniens répartis dans les musées archéologiques de l'ancien et du nouveau monde.

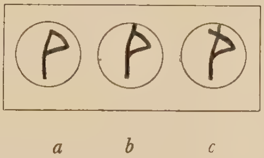

Fig. 37.—Marque Peinte en Rouge sous le Pied du Cratère de Ras Shamra (*a*) et ses Deux Variantes Possibles (*b*, *c*).

La marque sous le fond du cratère de Ras Shamra. Nous terminons donc cette présentation du vase de Ras Shamra en signalant la marque peinte en rouge sous le pied, fig. 2. Deux petits éclats ont légèrement abîmé le signe en haut et en bas, mais ce qui en reste permet de limiter à trois les possibilités de lecture, fig. 37. Or aucune de ces variantes ne se rencontre parmi les différents signes jusqu'ici relevés sur les autres vases mycéniens réunis dans notre liste et dans celle de Casson citées plus haut. Elles ne se retrouvent pas non plus parmi la totalité des signes de l'alphabet chypriote actuellement connus, ni dans les signes linéaires de l'écriture de Cnosse. On les voit apparaître seulement plus tard dans les inscriptions de Formello, Théra, Mésa et dans l'alphabet grec avec la valeur R.

La marque est cependant si simple que nous n'osons décider si elle avait déjà ou non la valeur d'un signe déterminé d'écriture ou d'un chiffre (capacité, prix . . .) ; nous abandonnons la discussion de cette question aux épigraphistes.[1]

Résumé. Voici, en résumé, les résultats atteints dans cette étude sur le cratère mycénien de Ras Shamra et les divers points sur lesquels nous avous voulu attirer l'attention.

Le cratère mycénien à figuration de char de Ras Shamra a été trouvé en fragments parmi les ruines d'une habitation d'Ugarit et date du XIV^e^ siècle avant notre ère. Le dessin est peint par des coups de pinceau tracés à main levée avec une grande habileté, sans hésitation et sans repentirs. Il témoigne d'une extrême routine, mais qui n'a pas diminué le sentiment du dessin. Le peintre, avec une réelle sensibilité d'artiste, se plaît à accuser certaines caractéristiques pour donner plus d'élégance décorative ou plus de style à son dessin.

Les chars à deux roues figurés appartiennent au type C de la classification de Sir Arthur Evans, sur lequel un étai relie le parapet avant de la caisse à l'extrémité antérieure du timon. Etai et timon sont rendus solidaires par des lanières, formant ainsi un triangle indéformable et cependant élastique. Sur son dessin le peintre a confondu étai et timon, ce dernier n'étant pas relié au plancher du char.

La façon dont il a figuré le détail du harnais, partiellement tracé en blanc sur le corps rouge du cheval, n'est pas non plus tout à fait claire. Une ligne blanche, parallele au contour extérieur du corps du cheval, donne à l'œil l'illusion de voir les chevaux avec un profil décalé. L'absence de sangle est évidemment due à l'oubli ou à l'ignorance du peintre. Signalons aussi les curieuses perforations à la base et au sommet des anses.

Le principal sujet du panneau B, en dehors du char, est un grand oiseau couché sur le ventre et dont le cou est attaché au sol par une tresse ou une chaîne. L'identification de l'oiseau présente des difficultés, mais ses dimensions devaient atteidre la hauteur du cheval qui lui fait face. La scène peut donc faire allusion à un récit légendaire d'un combat entre des héros et un oiseau énorme, ou bien représenter la chasse à cet oiseau de proportions fantastiques. Ces cratères mycéniens seraient donc en quelque sorte les prototypes des cratères athéniens qui figuraient les légendes du folk lore grec. Le fait de l'utilisation fréquente des œufs et plumes d'autruche dans le monde égéo-mycénien a pu diffuser chez certains la connaissance d'un oiseau de taille exceptionnelle et provoquer dans l'imagination populaire des récits de chasse ou de combat contre un oiseau fabuleux. D'ailleurs, dans le monde méditerranéen, dès les plus hautes époques ont circulé des récits épiques ou des histoires de combats et d'aventures diverses entre des divinités ou des héros et des monstres. Ils y furent même déjà conservés sous forme d'écrits comme le confirment les textes mythiques découverts à Ras Shamra. D'autre part la représentation figurée de monstres et d'animaux sauvages capturés et ligotés était non moins répandue dans la mythologie méditerranéenne. On y parlait aussi de trésors cachés et défendus par des dragons comme le monstre marin Tannîn à laquelle la déesse Anat de Ras Shamra arrache l'or du Saphôn, après l'avoir ligoté.

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[1] Prof. A. M. Honeyman de l'université de St. Andrews a bien voulu me donner son avis : ' The sign does not suggest anything to me for cent. XIV–XIII in Cyprus. It is, of course, not unlike a much later form of the letter *gof* ; but in the oldest known Phoenician from Cyprus, viz. CIS, I, 5 and an inscription of about 800 B.C. to be published by me in *Iraq*, the letter has a totally different appearance.'

Certains détails du dessin, sur les nombreux cratères mycéniens déjà connus à ce jour devraient permettre d'identifier les artistes ou plutôt l'atelier ou l'école d'où sont sortis ces beaux vases. Les marques peintes en rouge sous le pied de ces cratères, dont un nouvel exemple inédit nous est fourni par le vase étudié ici, semblent être également le signe distinctif d'ateliers céramiques.

Claude F. A. Schaeffer.

THE GREEK ACROPHONIC NUMERALS[1]

In 1913 an essay of mine appeared in the *JHS* (XXXIII 27 ff.) entitled 'Three Greek Numeral Systems.' Shortly afterwards I published in this *Annual* (XVIII 98 ff.) an article on 'The Greek Numeral Notation,' in which I collected and summarised the available evidence for all the numeral systems of the acrophonic type used among the Greeks and set forth the main conclusions to which that evidence pointed. In a later volume (XXVIII 141 ff.) I added some 'Further Notes on the Greek Acrophonic Numerals,' recording the examples which had accumulated since the publication of my previous article and giving a new and fuller edition of an important text from a site near Andania in Messenia (*IG* V 1. 1532). No further discussion of the subject has appeared and scholars have repeatedly cited my articles as giving the fullest and most recent treatment of it. In these circumstances I think it well to survey the ground once more, correcting some errors of which I have become conscious and calling attention to some of the discoveries made during the last decade, in the hope that thus I may save those who are interested in this aspect of the Greek script from being misled by the errors or omissions of my previous presentation. And inasmuch as even a single series of addenda and corrigenda is notoriously unsatisfactory and a second might be regarded as well-nigh intolerable, I give in the following pages a complete list of all the places in the Greek world which have provided examples of acrophonic numerals, contenting myself with bare references to my three previous articles (which I shall denote by A, B and C respectively) in those cases, and they form the great majority, in which no further comment is demanded, and adding to these references where necessary some indication of the new evidence now available or the divergent interpretation which I now accept. The order of the following list is that followed by the *Inscriptiones Graecae*, or, for those parts of the Greek world which fall outside the scope of that collection, the *Corpus Inscriptionum Graecarum.*

Bibliography.—I have nothing to add to the Bibliography given in

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[1] I call attention to the following abbreviations used in this article:

A = *JHS* XXXIII 27 ff.
B = *BSA* XVIII 98 ff.
C = *BSA* XXVIII 141 ff.
DGE = E. Schwyzer, *Dialectorum Graecarum exempla epigraphica potiora.*
SEG = *Supplementum Epigraphicum Graecum.*
SIG or *SIG*³ = G. Dittenberger, *Sylloge Inscriptionum Graecarum* (ed. 3).

B 98 f., C 141, save the brief summary given by E. S. Roberts and E. A. Gardner in L. Whibley's *Companion to Greek Studies* ³ (Cambridge, 1916), 698 f. A. Rehm does not deal with the subject in his discussion of Greek inscriptions in W. Otto's *Handbuch der Archäologie*, I 182 ff.

1. Attica. B 100–1, 127–9, C 150–1. Of the inscriptions cited in C 151, the boundary *IG* II 1077 (= *IG* III 409) has been republished by J. Kirchner in *IG* II² 2639 with the note 'titulum non multo post med. saeculum IV incisum esse existimat Koe[hler],' while the πυλωροὶ-inscription is now *IG* II² 2292, where the numerals, if such they be, are given in the text as ΔΔΓΔΙ (l. 52), in the commentary as ΔΔ𐅃ΔΙ. After referring to Graindor's view, Kirchner adds 'At scrupulum movet quod post ΔΔ𐅃 rursus Δ positum est, ne dicam nos non intellegere, quid tam exiguus numerus a Δ incipiens hoc loco sibi velit.'

Numerous additional examples of the use of acrophonic numerals in Attic inscriptions have been brought to light by the excavations carried on in the Athenian Agora, but these show, so far as I am aware, no deviation from the well-attested Attic usage and need not be discussed or listed here. Reference must, however, be made to Kirchner's edition (*IG* II² 2777–81) of five Attic *abaci*, of which one (2781) was previously unpublished. They contain the following numerals:

2777 (Salamis, now in the Epigraphical Museum) has

Τ𐅆Χ𐅅Η𐅄Δ𐅃ͰΙCΤΧ

thrice repeated, save that twice the initial Τ is omitted and once 𐅄 takes the place of 𐅄.

2778 (Acropolis, now in the Epigraphical Museum) has

[ᴍ]Χ𐅅Η𐅄Δ𐅃ͰΟC–

Whether the first figure should be restored as ᴍ (as in 2779) or as Τ (as in 2777) I cannot say; what is remarkable is the use here of Ο in place of Ι to indicate the obol (as in 2780; cf. B 101, n. 2).

2779 (Acropolis, now lost) has ΜΧ𐅅Η𐅄Δ$\underset{\mathrm{T}}{\text{𐅃}}$.

2780 (Eleusis) has three series, 𐅅Η𐅄Δ𐅃ͰΟ, 𐅅Η𐅄Δ𐅃ͰΟC and 𐅅Η𐅄 - - -

2781 (In the National Museum, Athens) has

Χ𐅅Η𐅄Δ𐅃ͰΤΙC̣

The position of the Τ, before rather than after ΙC, must be due to an engraver's error (cf. B 128).

In Ἀρχ. Ἐφ. 1934–5, 128 ff. P. D. Stavropoullos publishes a perfectly preserved text from the temple of Nemesis at Rhamnus, now in the Epigraphical Museum at Athens (inv. 12863): it is dated by the editor in 'the beginning of the second half of the fifth century B.C.,' and the earliest entry at least appears to be attributable to the 440's. Of the eleven sums of money acrophonically represented in this inscription, I select the following three as containing all the numerals used:

L. 9 MMM𐅆:XX (37,000 dr.)
Ll. 18–9 𐅇XHHH𐅄ΔΔΔΔΓ⊢⊢IIIII (51,397 dr. 5 ob.)
L. 30 MXXX𐅅 (13,500 dr.).

A colon (: or ⋮) is placed at the beginning and end of each numeral-complex, save where it begins or ends a line of the inscription. It is of interest, further, to note that at Rhamnus the talent is ignored and sums of money, however large, are represented in drachmas and obols; thus what would be expressed at Athens as TTX𐅅 appears at Rhamnus in the form MXXX𐅅 (l. 30).

2. AEGINA. B 101, 128.

3. CORINTH. C 142, 150. The fine-inscription is re-edited by B. D. Meritt (*Corinth*, VIII 1. 30–1, No. 22), who accepts eight obols as the probable interpretation of the numeral signs and holds that 'the shapes of the letters agree with the topographical data in assigning the inscription to the early part of the fifth century B.C.' G. Klaffenbach regards it as 'enigmatic' (*Deutsche Literaturztg.* 1932, 1693).

4. SICYON. B 125 (coins).

5. NEMEA. B 103, 131, C 142.

6. The ARGIVE HERAEUM. B 103.

7. KOUTSOPODI. B 102, 128, 130.

8. ARGOS. B 102, 125, 127, 131, C 142.

9. HERMIONE. B 105.

10. TROEZEN. B 104–5, 127.

11. EPIDAURUS. B 103–5, 130, 132. It will, I think, be my simplest and best course to cancel my previous discussion of the Epidaurian numerals (B 103–4) and the accompanying table (B 105, fig. 1) so far as it relates to Epidaurus, and to substitute for them the following restatement and revised table (fig. 1). For, in the first place, F. Hiller von Gaertringen in 1929 re-edited all previously known Epidaurian inscriptions (*IG* IV^2 1) and added to them a considerable number hitherto unpublished, so that the relevant materials are now richer and more accurately recorded than

when first I studied them. Secondly, von Hiller's treatment of the numerals may well prove somewhat puzzling, inasmuch as he saw reason to change his opinion during the course of his work, and himself rejects on p. 70 the account which on p. 43 he accepts as satisfactory.[1] Thirdly, renewed study has led me to the conclusion that neither Fraenkel's interpretation (*IG* IV¹, p. 325), which I have so far accepted, nor that which von Hiller now substitutes for it is tenable, and I here propose a new one, which to me seems both simpler and more in accordance with the available evidence. I shall clear the ground by dealing first with the difference between my present view and those of Fraenkel and von Hiller.

The question in dispute is that of the number of χαλκοῖ (or, as they were called at Epidaurus, χάλκεοι) comprised in the obol. In Attica 8 χαλκοῖ = ι ὀβολός, but the number varies in different Greek states. Fraenkel argued in favour of the equation 18 χάλκεοι = 1 ὀβολός at Epidaurus, and this view was accepted by me in B 104 and by von Hiller in *IG* IV² 1, p. 43. The latter, however, noticed that in *IG* IV² 1. 110. 45 the words ἐννέα χαλκέων occur and pointed out that ἡμιωβελίου would have been written in their place if the obol had contained 18 χάλκεοι; he therefore postulated for Epidaurus an obol consisting of 24 χάλκεοι. These two views may be best represented in the following table:

Fraenkel				von Hiller			
C or <	9	ch. =	$\frac{1}{2}$ ob.	C or <	12	ch. =	$\frac{1}{2}$ ob.
𐅃	5	,, =	$\frac{5}{18}$,,	T	6	,, =	$\frac{1}{4}$,,
T	$4\frac{1}{2}$	,, =	$\frac{1}{4}$,,	𐅃	5	,, =	$\frac{5}{24}$,,
Σ	2	,, =	$\frac{1}{9}$,,	Σ	2	,, =	$\frac{1}{12}$,,
X	1	,, =	$\frac{1}{18}$,,	X	1	,, =	$\frac{1}{24}$,,

The question as between these two interpretations would be at once settled if 𐅃 and T occurred in the same group of figures, since, if the obol contains 18 ch., 𐅃 must precede T, if 24, it must follow T; but such a collocation is not found in the surviving inscriptions. The following considerations, however, lead me to reject both these views and to regard the Epidaurian obol as containing 12 χάλκεοι, as did also the Boeotian, Delphian and Delian:

(*a*) I agree with von Hiller that the use of the phrase ἐννέα χαλκέων in 110. 45 invalidates Fraenkel's view, which, moreover, arouses my suspicion by the frequent use of T indicating $4\frac{1}{2}$ ch. although no other sign is found of the subdivision of the χάλκεος.

(*b*) The number 18 strikes me as improbably large for the number of χάλκεοι in the obol, and the same is true *a fortiori* of 24.

(*c*) There are references in words to χαλκέων πέντε (106 i 95, 97), ἐννέα χαλκέων (above), δέκα χαλκέων (106 i 86) and χαλκέων ἕνδεκα (103. 310 *add.* p. 144), but none to any larger number than eleven.

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[1] G. Oliverio, *e.g.*, in *Documenti Antichi dell' Africa Italiana*, I. 2, cites p. 43 five times (142 n. 1, 153 n. 7, 154 nn. 4, 9, 12) as if it contained von Hiller's final judgement.

(*d*) Fraenkel and von Hiller have failed to observe that in the three inscriptions in which the sign ≤ or Σ occurs (102. 302, 103. 50, 104. 4) the sign X is not found. There is therefore no difficulty about regarding these two signs as alternative means of representing the same value, the χάλκεος, though I admit that I cannot explain why ≤ should serve this purpose. This solution saves us from the necessity of differentiating between the value of ≤ and of X and assigning to the former the value 2 ch., which is contrary to analogy and takes no account of the large number of cases in which we find XX. Indeed, the doubling of the ≤ in all four places where it occurs is in accord with the treatment of the X, which is doubled in 24 cases and appears singly only seven times.

(*e*) The assumption that 12 χάλκεοι = 1 ὀβολός provides examples in the extant inscriptions of all values from one to eleven χάλκεοι (I omit for the present purpose the drachmas and obols):

1	ch.	X (106 i 75, 110 *A* 2).
2	,,	≤≤ (102. 302), XX (106 i 93, 109 iii 84, etc.).
3	,,	T (102. 299, 103. 127, etc.).
4	,,	TX (109 ii 141, 145).
5	,,	Γ (102. 172, 178, 189, 292), TXX (106 i 92, ii 141, 109 ii 145, etc.).
6	,,	C (102. 217, 222, etc.), < (102. 290, 292, 296, etc.).
7	,,	CX (105 *B* 10).
8	,,	<ΣΣ (102. 302), C≤≤ (103. 50, 104. 4), CXX (109 ii 114, etc.).
9	,,	CT (109 iii 116, 133, etc.).
10	,,	CTX (109 iii 132, 110 *A* 25).
11	,,	<Γ (102. 221), CTXX (115. 23).

Little more need be said on this subject. Of the two signs for the $\frac{1}{2}$ obol, C and <, the former is by far the commoner, being used everywhere except in 102. 221, 290–302 and in 109 ii 152. The Γ (= 5 ch.) of 102 is unambiguous, for in that inscription no single sign is used for 5000, 500, 50 or 5 dr.; when Γ, or a compound of Γ, is introduced to indicate drachmas, Γ is no longer used for 5 ch. T is interpreted by Fraenkel and von Hiller as T(εταρτημόριον), i.e. $\frac{1}{4}$ obol, for which it certainly stands in Attica; in my view also it stands for $\frac{1}{4}$ obol, but the use of the term τρίχαλκον in 109 iii 140 and 116. 15 leads me to regard T rather as the initial letter of that word. Finally, we may note that in 110 *A* 2, 11, 12, 29 the X is smaller than the other numeral signs and is raised slightly above their level.

A few anomalies remain, which do not, I think, seriously militate against the interpretation advocated above, but are due to errors of the engraver, the copyist or the editor. These are TC̄ in 103. 132, ṬCXX in 108. 115, TC in 109 ii 106, 124, <XX[X] in 109 ii 152, C[TX]XX in 109 iii 62, and T. || in 117. 13. The ≤T of 743. 5 must, in my view, like the Y of 102. 152, be the beginning of the word following the numerals. A further problem is presented by a fragment (M. Mitsos, Ἑλληνικά, VIII. 10 f.) of which l. 4 begins :≤≤≤ΠΑΥΛΑΣ. The editor interprets the opening signs as 2 dr. 11 ch. and claims that, since 11 ch. appears here alone in the temple-accounts, 'we do not know whether it was written thus or as T⊠.' He assumes that ≤ = 2 ch., but his interpretation must be rejected because ≤ (2 ch.) cannot precede Γ (5 ch.) and because ≤≤≤Γ would be represented in von Hiller's system by TΓ, in Fraenkel's by C≤. All I can assert, therefore, is that, if this new evidence does not favour my view, it is at least equally unfavourable to those of my predecessors.

I turn now to discuss more briefly the figures representing drachmas and obols, about which there is no dispute.

IG IV² 1. 102 (first half of the 4th cent. B.C.) contains the building-accounts of the temple of Asclepius, extending over five years. Of the many sums there expressed the following may serve as examples: l. 28 BBBBBBBB====: |||, l. 47 XXXXXXXXXBBBBBBBB, l. 67 XBBB=—:::, l. 163 —::::·|. For the values of these signs see fig. 1. The only irregularities I have noted in this inscription are (*a*) the representation of 3 dr. by ⋮ in ll. 8, 32, 189, 220, (*b*) that of 5 dr. by :·: (l. 76) or ·:: (l. 111) and of 7 dr. by ::·: (l. 103), and (*c*) the complex ≡==== (l. 68), in which the ≡ may perhaps stand for the pure number 30 and the remaining signs for 80 dr.

In *IG* IV² 1. 103 we have the accounts of the construction of the Tholos, which falls in three periods, dated by Keil *c.* 386–71, 363/2–359/8 and 333/2–328/7 respectively. The signs X — · | indicate 1000 dr., 10 dr., 1 dr. and 1 ob. respectively, as in 102, and 100 dr. is represented by B, except in ll. 125, 131, 134, 136, 137, where the open form H takes its place. But from the outset single signs are used for 5000 dr. and 500 dr.; from line 40 onwards a single sign is used to denote 50 dr. in place of the ==— which occurs five times in ll. 6–15 and again sporadically in ll. 104, 124, 125, 131; and from line 146 onwards a single sign takes the place of ::· to denote 5 dr. For the forms of these signs see fig. 1. In ll. 192–329 the numerals relate sometimes to money, sometimes to bushels; the word δραχμαί or μέδιμνοι is therefore prefixed to each number (cf. 110). The phrase ὁλκὰ βολίμου τάλαντα—:::: in ll. 109–10 suggests that — and · represent 10 and 1 respectively as well as 10 dr. and 1 dr.

In 104–5, 108, 110–5, 117–9, 743 there are few points to note. In 104. 5 ΓB appears for 500 dr. In 105 ⊠ and Γ represent 50 and 5 dr., though Γ stands for 50 dr. in i 17. Here first (i 17, 18) we find the obol-signs grouped in pairs, so that ΙΙ ΙΙ = 4 ob., a practice which often recurs elsewhere (106 i 12, 43, 108. 114, 157, etc.) together with the representation of 5 ob. by ΙΙΙ ΙΙ (e.g. 106 i 9, 15, 55), ΙΙ ΙΙΙ (106 i 27), ΙΙ ΙΙ Ι (108. 141) Ι ΙΙ ΙΙ (108. 149), or ΙΙ Ι Ι Ι (108. 142). In 108 money-values are sometimes prefixed by δραχμάς and there is some inconsistency in the use of Γ⊟ or 𐅅 for 500, ⊟ or Η (l. 112) for 100, 𐅄 (l. 40) or 𐅄 for 50, and Γ Γ or even Π (l. 129) for 5 dr. The same uncertainty with regard to the sign for 5 ob. recurs in 110, 115, 117; 50 dr. appears as 𐅄 in 112 and as 𐅄 elsewhere, and in 114 both the open and the closed ⊟ appear in the sign for 500 dr., while in 117 only the open Η is used.[1] In 118. 17 ⁝ ⁝ : indicate, apparently, 8 dr.

In 106 we have the fourth-century accounts of the Aphroditium and the ἀνάλαμμα of Apollo. For the numeral signs see fig. 1. The open Η occurs occasionally, though ⊟ is normal; side by side with 𐅄 (50 dr.) and Γ (5 dr.) appears a simple Γ, which, if the copy is correct,[2] stands sometimes for the one, sometimes for the other. Noteworthy is the use of Δ for 10 dr. in the last line (iii 119) of the record, used elsewhere only in 110 *B* 11.

Finally, in 109 we have a seriously mutilated copy of the accounts of τὰ ἐπὶ Κυνὸς (or Κυνὶ) σκανάματα, dating, to judge by the script, from the early 3rd cent. B.C. Sums of money are normally preceded by δραχμαί or λόγος, and numbers are frequently written out in words. Apart from the use of C and < for ½ ob., there are no variant signs used in this inscription; this shows the final standardization of the Epidaurian monetary symbols, which recur as late as about 221 B.C. in *IG* IV² 1. 42 (which gives us the valuable equation 𐅄Γ⊟⊟ = ὀγδοήκοντα μνᾶς in ll. 2, 17) and in another third-century record (98. 12), where the word Ἀλεξανδρείας precedes.

12. MESSENE. B 106–7, 129, 132, C 143.

13. ANDANIA. B 107–8, C 143, 151–7.

14. REMOUSTAPHA. B 106, C 143.

15. TEGEA. B 105–7, 125, 132, C 142. In Ἀρχ. Ἐφ. 1936, 139 f., M. Mitsos interprets the ⊢⊢ of an inscription of the early second century B.C. as indicating 2, and says that the engraver used the signs current in Attica, etc., instead of the Tegean signs, viz. ⊢⊢ (= 2) in place of ‹‹ (= 2), found on another unpublished inscription. But in Attica ⊢⊢ always denotes

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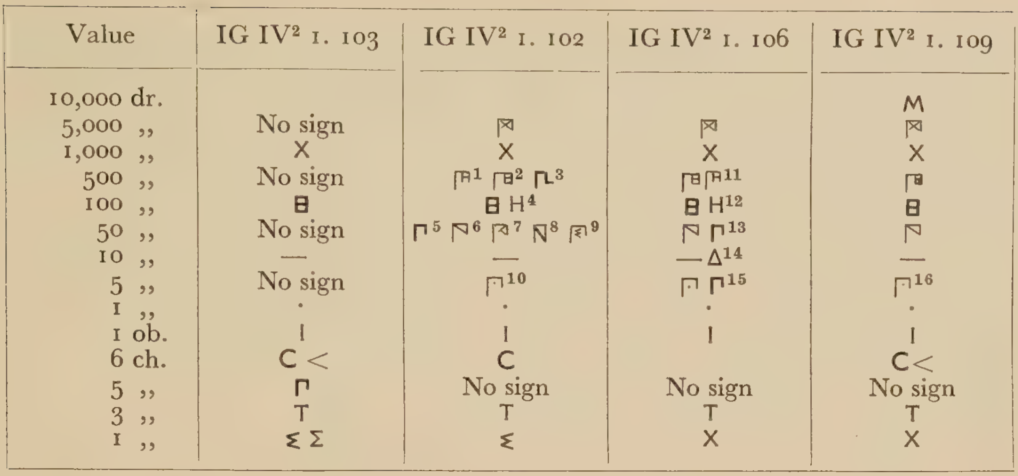
[1] I do not understand . . . ΙΙΙΙΙ . . Τ𐅅𐅄 in 117. 8, nor the value of the sign >, which occurs for the first and last time in 117. 13.

[2] To an error of engraver or editor I attribute the ΙΙΙΙΙΙ of i 75, the ═Ι:. C of 110 *B* 38 and the εΙ: of 112. 16. In 110 *B* 11, ΔΓϹ̣ΙΙΙ must, in the light of the context, stand for 17 dr. 3 ob.



Value	IG IV² I. 103	IG IV² I. 102	IG IV² I. 106	IG IV² I. 109
10,000 dr.				M
5,000 ,,	No sign	𐅆	𐅆	𐅆
1,000 ,,	X	X	X	X
500 ,,	No sign	𐅅[1] 𐅅[2] 𐅅[3]	𐅅 𐅅[11]	𐅅
100 ,,	𐌇	𐌇 H[4]	𐌇 H[12]	𐌇
50 ,,	No sign	𐅃[5] 𐅄[6] 𐅄[7] N[8] 𐅄[9]	𐅄 𐅃[13]	𐅄
10 ,,	—	—	— Δ[14]	—
5 ,,	No sign	𐅃[10]	𐅃 𐅃[15]	𐅃[16]
1 ,,	·	·	·	·
1 ob.	I	I	I	I
6 ch.	C <	C		C<
5 ,,	𐅃	No sign	No sign	No sign
3 ,,	T	T	T	T
1 ,,	≤ Σ	≤	X	X

FIG. 1.—TABLE SHOWING THE SIGNS USED AT EPIDAURUS.

Notes on the above table: [1] Ll. 10–14, 124–7, 169, 175. [2] Ll. 15, 88–102, 150–5, 174. [3] Ll. 57–75. [4] Ll. 125, 130–1, 134, 136, 137. [5] Ll. 40–127, 166, 294. [6] Ll. 129, 146–9, 161–5, 174–5, 179, 277. [7] L. 133. [8] L. 152. [9] L. 176. [10] Ll. 146–end. During the first 21 years (ll. 1–138) :: · is used for 5 dr., and this recurs in ll. 161, 318; the omission of the dot from the 𐅃 of l. 260 may be accidental. [11] L. ii 141. [12] Ll. i 14, 67. [13] L. i 57. [14] L. iii 119; cf. 110 *B* 11. [15] Ll. i 65, ii 141: in i 11, 40, 72 the value of 𐅃 is doubtful. [16] In ii 114:::: = 8 dr., in ii 145 ::: = 6 dr. In ii 124, iii 116 the 𐅃 lacks the central dot—accidentally? I am uncertain of the value of 𐅃 in i 130.

two drachmas, never 2, and at Tegea similarly < always stands for the drachma, not for the simple unit.

16. MANTINEA. B 125.

17. HERAEA. B 125.

18. PHIGALEA. C 143.

19. MEGALOPOLIS. B 106, C 142–3.

20. DYME. B 108.

21. OROPUS. B 108, C 143. *SIG*² 580, 638, 639 = *SIG*³ 281, 287, 298 respectively.

22. BOEOTIA. B 127.

23. TANAGRA. B 108. The inscription to which I referred has been partially re-edited in *SIG*³ 1185 and in *DGE* 462, but in neither case is that portion of it included which contains the numeral signs.

24. THESPIAE. A 31–4, B 109–10, 129, 131. Marked progress has been made, thanks chiefly to the careful researches of M. Feyel, with the collection, scrutiny and interpretation of the Thespian signs for numbers and values. The most important recent publications have been (*a*) an article by A. D. Keramopoullos in Ἀρχ. Δελτ. XIV, in which are edited an opisthographic stele containing a large number of numerals (pp. 12 ff.) and another text including two numeral groups (pp. 26 f.); (*b*) an essay by A. Plassart on 'Locations de domaines sacrés à Thespies' in *Mélanges offerts à M. Octave Navarre* (Toulouse, 1935), 339 ff., containing the *editio princeps* (pp. 359 f.) of a new document inscribed on the reverse of *IG* VII 1741, as well as notes on 1740–1 (358 n. 2) and on the second of Keramopoullos' texts (342 and n. 2); and (*c*) a series of studies by M. Feyel, in which he discusses (*BCH* LVIII 501 ff., LX 175 ff.) an important stele published first by G. Colin (*BCH* XXI 553 ff.) and later, in an amended form, by R. Meister (*S B Leipzig*, LI 141 ff.),[1] and gives a complete re-edition (*BCH* LX 177 ff., 389 ff., LXI 217 ff.), based on P. Roussel's readings checked by himself, of the two stelae published by Keramopoullos.[2] Feyel ends with a re-examination of the Thespian numeral system (*BCH* LXI 228 ff.) so clear and concise that I need not repeat its substance here but content myself with presenting in fig. 2 a summary of his conclusions.

Values	1st System	2nd System *REG* X (1897) 26 ff.	Pure Numbers
10,000 dr.	$\overset{\Delta}{\mathrm{M}}$	Μ	
5,000 ,,	𐅆	[𐅆]	
1,000 ,,	Ψ	Ψ	
500 ,,	ΠΕ ΠΗΕ	ΠΗΕ	ΠΗΕ
300 ,,	ΤΗΕ	ΤΗΕ	
100 ,,	ΗΕ	ΗΕ	ΗΕ
50 ,,	ΓΕ ΓΕ Γ^{E}	ΓΕ	[ΓΕ?] 𐅄
30 ,,	Ᵽ Ᵽ Ƀ Đ		No sign
10 ,,	Đ	[Δ?]	Δ
5 ,,	No sign	[Γ?]	Γ
2 ,,	Σ ς		No sign
1 ,,	▷	⊦	|
3 ob.	Τ		
1 ,,	Ο	|	
½ ,,	Η		
1 ch.	Χ		

FIG. 2.—TABLE OF SIGNS USED AT THESPIAE.

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[1] Cf. A. Plassart, *op. cit.* 342. The opening portion of this inscription is republished in *DGE* 485 and in Solmsen–Fraenkel, *Inscr. graec. ad inlustr. dial. sel.* 18, but these editions are without value for our present purpose.

[2] On Feyel's work C. Picard passes a highly laudatory judgement in *CRAcInscr* 1936, 116 ff.

25. Thebes. B 108–9. By an oversight I gave to I the value 3 obols in the table (B 109, fig. 3); in reality it represents 1 obol.

In Ἀρχ. Ἐφ. 1936, παρ. 42, A. D. Keramopoullos publishes the almost illegible inscription on the left-hand side of the stele containing *IG* VII 2423. It records various offerings dedicated by women, free and slaves, with their respective weights introduced by ἄγον, ἄγοντας, ἄγουσαν, etc. These weights are IIII, III (twice), IIIICTˋ, IITˋ, C (twice) and HE. The editor offers no interpretation of these signs, but refers to the similar list of offerings and their weights in *IG* VII 2424, where, however, the weights are denoted by alphabetic numerals preceded by ὁλκή. Another list with ἄγου[σα], ἄγου[σαι] and, possibly, [ἄγ]οντας is found in a Theban inventory (*IG* VII 2425*a*) of the second or third century A.D., but there no numerals survive. That C and T denote $\frac{1}{2}$ and $\frac{1}{4}$ of the unit of weight indicated by I, presumably an obol, is highly probable, and ˋ must represent a smaller fraction, perhaps $\frac{1}{8}$ or $\frac{1}{12}$.

26. Acraephia. M. Feyel publishes in *BCH* LX 27 ff., an Acraephian inscription, now in the Museum at Thebes, which dates, to judge by the letter-forms and the dialect, from the first half of the 2nd cent. B.C. and contains a list of salt- and fresh-water fish, followed by numerals indicating money-values, probably either the maximum or the standard prices chargeable per mina. Twice (ll. 25, 27) the word μνᾶς is shortened to MN. The signs of value are these: I𐅃X (ll. 8, 9, 15, 19?, 22?, 32?), IXX (ll. 5, 7), IX (l. 24?), I (l. 6), I - - - (ll. 3, 12, 18), HTX (l. 36), H (l. 28), 𐅃X (ll. 10, 37). The editor (rightly, I think) interprets I as an obol, H as $\frac{1}{2}$ ob., T as $\frac{1}{4}$ ob. and X as a χαλκοῦς. He first thought that 𐅃 = 5 ch. and 𐅃X = 6 ch. = $\frac{1}{2}$ ob. (for in Boeotia 12 ch. = 1 obol), but (*a*) that value is almost certainly indicated by H, and (*b*) it is noticeable that 𐅃 never occurs without X immediately following. He therefore regards 𐅃X as a kind of double sign for 5 ch., and thinks that the successive numbers of χαλκοῖ up to 12 (= 1 obol) would be thus represented (cf. *BCH* LXI 232 f.):

1	X	5	𐅃X	9	HT
2	XX	6	H	10	HTX
3	T	7	HX	11	H𐅃X
4	TX	8	HXX	12	I

27. Orchomenus. A 34, B 109–10, 131, C 143–4. *IG* VII 3171 = *DGE* 526. See M. Feyel, *BCH* LXI 232 f.

28. Delphi. B 107, 110–1, 129. In B 110, No. 22(*a*) must now be deleted. True, Bourguet restored OΛ . . . . . ΔI as ὁλ[κὰ HH𐅄]ΔI in the Delphian accounts of 330 B.C. B. Keil, however, showed (*Hermes* XXXVII 511 ff.) that the only restoration epigraphically admissible on the assumption that the word ὁλκή is followed by a numeral complex is ὁλ[κὴ χρ. HH]ΔI,

or ὀλ.[στα. ΗΗ]ΔΙ, but that such an assumption is, for various reasons, untenable. He therefore restored Ὀλ[υμπιά]δι, which has been accepted as convincing by H. Pomtow (*SIG* 252. 6) and by Bourguet himself in re-editing this text in the definitive publication of the Delphian inscriptions (*Fouilles de Delphes* III 5. 58, l. 6). Keil drew attention (*Hermes* XXXII 404, XXXVII 513) to the use of words in preference to numerals in Delphian financial records (*e.g.*, in *op. cit.* iii 5. 50 iii 30 f. we have τάλαντα πεν[τ]ή[κο]ντα ἑπτὰ μναῖ εἴκοσι μία ὀβολοὶ πέντε χαλκ[ο]ῖ ἑπτά), and nothing has more impressed me in looking afresh through the six published fascicules of the epigraphical volume of the *Fouilles de Delphes* than the fact that I have found in them only one example of acrophonic numerals (III 1. 310), which I cited in B 111. This is the more remarkable, because one whole fascicule (III 5) is devoted to fourth-century accounts and cognate documents, while there are in them a very large number of manumission-records, each containing a note of the purchase-price, which in neighbouring states is frequently, not to say normally, indicated by signs (see below, Nos 30–33, 35). Keil accounts for this peculiarity thus (*Hermes* XXXII 404; cf. XXXVII 513): ‘It would be making a virtue of necessity to seek to trace herein the effort to attain greater security; even as it was, the engraver allowed himself to be guilty of errors precisely in the numeral words. In view of the medley of elements forming the administration, it was necessary to have recourse to the numeral words which were generally intelligible, because there was not as yet any generally accepted international system of numeral signs.’ Such a view may well contain some measure of truth, but I do not feel sure that it gives the complete explanation of the phenomenon in question. For, in the first place, I cannot believe that the numeral system used at Delphi in 258 B.C. (see B 107, 111) would have caused serious difficulty to any educated Greek. Secondly, the public accounts of Tauromenium[1] contain no numerals, but are written out in words despite the obvious inconvenience of such a procedure, and that although there is no international element in the Tauromenian administration and the accounts belong to the end of the second and the earlier years of the first century B.C., when the greater part of the Greek world used a numeral system, the alphabetic, which was quite free from local variations or peculiarities. Here at least the explanation can hardly be that postulated by Keil in the case of Delphi. Moreover, though neither the employment of words nor that of numeral signs will guarantee for the inscription immunity from the errors due to an engraver's carelessness (or to that of the official who drew up the manuscript text which was the basis of the engraver's work), it must surely be admitted that words are not nearly so liable to deliberate alteration as figures, and especially those of the acrophonic type, and so do provide a greater measure of security than figures can afford (cf. § 86 below).

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[1] *IG* XIV 423–30; cf. *SIG* 954, V. Arangio-Ruiz e A. Olivieri, *Inscr. Graecae Siciliae et infimae Italiae ad ius pertinentes*, 71 ff.

29. Elatea. B 110. *SIG*² 141, 143 = *SIG*³ 231, 233.

30. Physcus. B 111, C 144.

31. Naupactus. B 107, 111–2. Three of the relevant texts, *IG* IX 1. 359, *AM* XXXII 9, and *IG* IX 1. 381, are now re-edited in *DGE* 389, 390 and 391 respectively.

32. Calydon. We have a number of Calydonian manumissions, dating from about 150–120 B.C., engraved on the front and right-hand side of a large limestone stele now in the Museum at Thermus. The recorded prices, preceded in each case by τιμᾶς ἀργυρίου, are three and five minas, ΜΜΜ (*IG* IX² 1. 137, ll. 6, 44) and 𐅳 (l. 90); once (l. 71) the price has been omitted. More interesting is the fine, ἀργυρίου CCY (l. 17), imposed upon an emancipated slave in the event of his failure to carry out certain stipulations attached to his manumussion. The editor, G. Klaffenbach, notes ‘De siglis non constat; suspiceris autem summam 2½ drachmarum significari.’

33. Arsinoea. In *SBBerl* 1936, 360, Klaffenbach publishes a manumission-record containing the phrase τιμᾶς ἀργυρίου ΜΜ.

34. Thermus. B 125. The bronze Aetolian mina is now in the Numismatic Museum at Athens and is republished in *IG* IX² 1. 83, where it is assigned to the late 3rd cent. B.C. A *lex sacra* from Thermus (*ib.* 1 + Add. p. 82), belonging to the same century, bears the words – – ἀργυρίου] Μ, ὀλὰς ἀργυρίου Μ - -

35. Phistyum. B 112. In *IG* IX² 1. 95–106, 108 (of which 103 = *IG* IX 1. 417) we have a group of 13 manumissions in which the ransom is recorded in numerals preceded by τιμᾶς ἀργυρίου (save in 102, where ἀργυρίου is omitted, and in 106, where ΤΙΑΡΓΥΡΟΥ is written). The recorded prices are Μ̄Μ (96), 𐅳 (97, 108), ΜΜΜΜΔ (103), ΜΜΜΜ (98–9), ΜΜΜ (95, 100–2, 105–6); that of 104 is uncertain. The Δ of the sum recorded in 103 is now established beyond doubt.

36. Stratus. B 112, C 144.

37. Thyrrheum. B 112, C 144–5. G. Klaffenbach has discovered two further fragments of *abaci* (*SBBerl* 1935, 719). He kindly informs me that these bear signs exactly like those illustrated in C 144, fig. 1, in one case extending from 𐅄 (partly preserved) to T, in the other comprising

the two signs Δ 𐅄, and that his examination of the *abacus* in question, found by Rhomaios, proves that in both series of value-signs Δ is used to represent 10 minas.

38. Cranii (Cephallenia). B 125.

39. Corcyra. B 112–3.

40. Melitea. B 125, 129.

41. Corope. B 112–3, C 145.

42. Thessalonica. B 124–5.

43. Olynthus. The excavations at Olynthus, conducted by D. M. Robinson, have brought to light a number of deeds of sale, four of which contain purchase-prices expressed in a notation not found elsewhere except at Sermyle (see below). They all date from the first half of the fourth century, before the destruction of Olynthus by Philip of Macedon in August, 348 B.C., and are published in the *Transactions of the American Philological Association*. The signs used are the following:

TAPA LIX 225 ff. and Pl. I	88XXX [1]
LXII 42 ff. and Plate I. 2	⋮ΨΨ
LXV 124 ff. and Pl. II. 3	8888X:
127 ff. and Pl. III. 4	ΨΨΨΨΨ888 [2]

It seems clear that Ψ8X represent sums of money in descending order of value, but their further interpretation presents serious difficulties. Robinson discusses the subject at some length in commenting on the earliest of his discoveries (LIX 227–30) and concludes that 88XXX = 23 gold staters. The ΨΨ of the second inscription he interprets as 2000 dr. (LXII 47 ff.), citing in support of this view a fragmentary sale-deed from Olynthus recording a price of τετρακισχιλίας (sc. δραχμάς) and other house-prices ranging from 500 to 5000 dr. In the third case he says that the price paid, 8888X, 'seems to be 400 X(ρυσοί) (*sic*) or gold staters' and alters his valuation of the first house from 23 to 203 staters (LXV 125 f.), while three pages later he assigns to the fourth price, ΨΨΨΨΨ888, without question the value 5300 dr. (LXV 129). Clearly there is something amiss here. If 88XXX = 203 gold staters, 8888X must be 401 rather than 400 staters, nor can I believe that in this group of approximately contemporaneous records the unit employed is sometimes the gold stater and sometimes the silver drachma. In view of the τετρακισχιλίας of

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[1] Cf. P. Wahrmann, *Glotta* XIX 162 f., S. R[einach], *RA* XXX 337, G. D[e] S[anctis], *Riv Fil* LVII 570, P. Roussel, *BCH* LIII 18.

[2] Cf. *AA* 1934, 502 f.

Excavations at Olynthus II 101, I prefer to regard all these numerals as expressing drachmas. That Ψ = 1000 I have little doubt; the sign occurs elsewhere with this value (B 106, 109, 124) and if we take it as 100, then 8 must = 10 and the recorded prices (23 dr., 200 dr., 41 dr. and 530 dr.) are suspiciously low. Similarly I take 8 as 100 rather than 10, for the prices otherwise denoted (23, 2000, 41 and 5030 dr.) would be too strikingly disparate. There remains X, which may represent 10 or 1. If I prefer the former to the latter, it is merely because 230 and 410 dr. appear to me more likely[1] prices than 203 and 401. If the reckoning is in silver drachmas, there is no special reason for regarding X as the unit (as would be the case if the reckoning were in χρυσοῖ), and therefore the argument that there is no parallel for the use of X to represent ten is worthless; the sign X, like 8, seems to be purely conventional and not strictly acrophonic. If I am right in my interpretation, the four recorded prices are 230, 2000, 410 and 5300 dr. respectively.

For the sake of completeness I add that bronze and lead weights found at Olynthus bear the inscriptions T for τάλαντον, H for ἑκατόν, ΠΕ for πεντήκοντα, MN for μνᾶ, etc., if Robinson's explanation is correct (*TAPA* LXII 56),[2] and that values expressed in the Attic notation are incised upon a cantharus and a number of pithoi (*Excavations at Olynthus* V 187, VIII 314 ff.).

44. Sermyle. S. Pelekides has published in Ἀρχ. Δελτ. IX, παρ. 40, a mutilated sale-record of the fourth century B.C. found at Vrastina Kalyvia, near the site of Sermyle. In l. 15 he transcribed τιμή .Y. BB XXXX, but offers no interpretation of the signs. D. M. Robinson examined the inscription in the Archaeological Museum at Salonica and found that the sign represented as B is in reality the same as the 8 of the Olynthian inscriptions discussed above; he therefore evaluates the price of the Sermylian house at 424 gold staters (*TAPA* LIX 227 ff.). Again I must raise an objection. The introduction of the numeral Y from the alphabetic system, in which it bears the value 400, is to my mind extremely improbable, and becomes impossible if Robinson's later interpretation of 8 as 100 is correct. I therefore think that the ·Y· of the Sermyle inscription (for so it appears in the photograph given by Pelekides, *loc. cit.*) is a variant of Ψ and that the price is, in accordance with the explanation of the Olynthian signs given above, 1240 dr.

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[1] In another Olynthian inscription, first published by A. Wilhelm, *SBWien* CLXVI 1. 42 ff. (cf. *BCH* XLVI 39, LIII 18), the price of a house is recorded as H - - - ήκοντα, clearly a multiple of ten.

[2] Cf. *Excavations at Olynthus*, VIII 353. I confess to some misgivings. Does H really represent ἑκατόν rather than ἡμιτάλαντον or ἡμίμναιον or ἡμιπέλεκον (cf. Hesych. *s.v.*)? Is ΠΕ abbreviated for πεντήκοντα and not for πέλεκυς (cf. *TAPA* LXII 55 f.) or πεντάμνους? But these and other questions cannot be answered without a knowledge of the actual weights of the inscribed objects.

45. [Moustenia (Pieria).] A late Imperial inscription from Moustenia, published by A. Salač in *BCH* XLVII 52 (= *SEG* II 416), opens with the letters KOS𐅆Ě, which I cannot interpret. The resemblance of the fourth sign to the numeral 5000 is, I believe, accidental.

46. Sara Musa. C 148 (jar).

47. Callatis. B 129, C 148 (jar).

48. Tomi. B 122–3, 129.

49. Chersonesus Taurica. B 123–4, C 148–9.

50. Delos. B 115–6, 128, C 146. Rapid progress has been made since I wrote C 146 with the final presentation of the Delian inscriptions in *corpus*-form. In 1929 F. Durrbach published the remaining accounts of the ἱεροποιοί (*Inscriptions de Délos*, 372–498), together with the laws, contracts and specifications (499–509), belonging to the period of Delian independence. In 1935, after Durrbach's death, P. Roussel edited the records of the Athenian officials who administered the temples after the restoration of Athenian control in 166 B.C. (1400–79) and fragments of various public documents (1480–96), and 1937 witnessed the publication by Roussel and M. Launey of two fascicules containing all other inscriptions, for the most part decrees, dedications, lists and fragments, subsequent to 166 B.C. (1497–2879). Of Nos. 1480–2879 only two concern us here, 2613 (a list of subscribers (?) of 3 or 4 obols apiece) and 2629 (possibly a donation-list);[1] but 372–498 and 1400–79 are full of numerals. I have said enough, perhaps, in B 115–6 of the Delian numerals of 315–166 B.C. and add only some further examples (cf. B 128) of high values:

Inscr. de Délos, 316. 6 𐅇ΜΜΜ𐅆ΧΗ𐅄ΔΔΔ⊢⊢⊢IIT// (86,183 dr. $2\frac{5}{12}$ ob.)
316. 9 𐅇ΜΜ𐅆ΧΧΧΧ𐅅𐅃- - IIIT (79,505 + dr. $3\frac{1}{4}$ ob.)
317. 29 𐅇ΜΜΧΧ𐅅Η - - (72,600 + dr.)
317. 35 $\overset{\Delta}{\mathrm{M}}$ΜΜ - - (120,000 + dr.)
465*c* 22 μυριάδες ΔΔΔΠ [δ]ραχμα[ί] (350,000 dr.)

Of the period of restored Athenian control, however, something must be added to B 116 in the light of the complete presentation of the available evidence in *Inscriptions de Délos*, 1400–79. The earliest record of this period (1400) is of special interest. In ll. 1–15 all numbers are written out in words, in ll. 41–53 acrophonic numerals are frequent (e.g. l. 48 ὁλκὴ δρα. ΔΔΔΔ⊢⊢⊢), but in ll. 17–36 we find over forty examples of the words ὁλκὴ μναῖ followed by an alphabetic numeral, though talents are indicated acrophonically, *e.g.*, l. 23 τάλαντα ϜT μναῖ κʹ, l. 24 ὁλκὴ T μναῖ ιʹ. No use of the alphabetic system is made in any other record of the series. Elsewhere talents (always of weight, not of value) are represented by T (1432 *Ab* ii 3, 4, 1441 *A* ii 41–50, 1451 *A* 44), or by T̂ (1449 *Aab* ii 127–31, 1450 *A* 143, 152–5), or by τάλαντα followed by a pure number (1409 *Ba* ii 29 [τάλαν]τα 𐅃 μναῖ ΔΔ𐅃IIII (5 tal. 29 minas), 31 [τάλαν]τα III μναῖ 𐅄𐅃, 33, 1423 *Bb* 8; but 1409 *Ba* ii 32 ὁλκὴ T μναῖ Δ𐅃). The word μναῖ is followed by pure numbers; thus in 1409 *Ba* ii 118 μναῖ 𐅃III = 8 minas, but in 1408 *A* ii 12 μναῖ 𐅄ͰͰ = 50 minas 4 dr. The μναῖ HC of 1403 *Bb* i 21 must = 100½ minas; cf. 29 μνᾶς ΔΔII ἥμυσυ. There is no variation in the signs XHΔI used for values, weights or pure numbers, but the form of 5 and its compounds varies between 𐅃 and ᴨ, often in the same inscription. The H of the 500-sign is usually attached to the right-hand vertical of the 𐅃, sometimes it hangs from the horizontal, rarely it is attached to the left-hand vertical (1408 *A* ii 42, 44, 1416 *B* i 77, 80). Of the forms of 50, 𐅄 is normal, but 𐅄 occurs in 1442 *B* 23, 27, 54. For 5 dr. the simple number is used; very rarely does the characteristic Delian Ϝ (1417 *A* i 88, 1432 *Ab* ii 25) or Ϝ (1416 *A* i 41, 1417 *A* ii 144, 1441 *A* ii 75, 1442 *B* 26) recur. Drachmas are still ligatured in Delian fashion, but in 1422. 12, 1432 *Bb* i 31, 1461. 8 they are written separately, and in 1429 *B* ii 18, 1432 *Ba* i 4 and 1449 *Ba* i 17 they are ligatured in pairs. In 1403 *Bb* ii 38 we have ὁλκὴ ὀβολοὶ ᴨ instead of ὁλκὴ IIIII. Once Π is used for 𐅃 (1417 *A* i 150), and once Ͱ is prefixed to a numeral group representing drachmas (1432 *Ba* i 27).

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[1] Even if it is rightly interpreted in this sense by L. Bizard and P. Roussel, *BCH* XXXI 465f., the numerals may belong to the alphabetic system.

I end by calling attention to a number of anomalies unnoticed in the editors' commentatory: 1408 *A* ii 14 μναῖ 𐅃ͰͰ (should probably be 𐅄ͰͰ: cf. ll. 11–13), 1417 *B* ii 42 δραχ. Δ𐅃IͰI, 1421 *Ba* ii 6 𐅄ΔΔΔͰͰ𐅃Ͱ, 1422. 7 δραχ[μὰς] χαλκίνας 𐅄𐅃H - -, 1439 *Cb* 20 [ὁ]λκὴ ᴨTIII, 1441 *A* ii 40 XX𐅃HH (for XX𐅅HH), 1449 *Ba* i 44 HHHHHIII (for HHHHHͰͰ III?), 1450 *A* 140 HϜΔΔΔΔͰͰͰ (for H𐅄ΔΔΔΔͰͰ), 143 T̂XXX𐅆X. These are probably due, in most cases if not in all, to the carelessness of engravers.

One curious extension of the acrophonic system deserves mention. When objects of a like nature are distinguished for the purposes of an inventory by bearing the letters A – Ω, AA – ΩΩ, AAA – ΩΩΩ, etc., we sometimes find 𐅃 or ᴨ with the letters A, B, etc., written within it (1432 *Aa* ii 16 ff., 1451 *A* 27 ff.) in place of AAAAA, BBBBB, etc. (1450 *A* 133 ff.).

51. Myconus. B 114. The Myconus dowry-register has been re-edited by E. Ziebarth in *SIG* 1215, where we have, in addition to the XX of l. 34, X in l. 35 and XXX in l. 39.

52. Rhodes. B 117, C 146. *IG* XII 1. 9 = *SIG*² 744 = *SIG*³ 1116.

53. LINDUS. B 117, 130.

54. CARPATHUS. B 117, 129, C 146.

55. MYTILENE. B 119, C 147.

56. METHYMNA. C 147. The decree of the νέοι of Methymna now = *SEG* III 710.

57. NESUS. A 29–31, B 119.

58. THERA. B 113, 117.

59. COS. B 113, 118, 131, C 146.

60. IOS. B 114.

61. NAXOS. B 113, 116–7, 128, C 146.

62. PAROS. B 114.

63. CEOS. B 114, 128, C 145–6.
IG XII 5. 568 = *SIG*^{2} 532 = *SIG*^{3} 964 = *DGE* 767.
IG XII 5. 647 = *SIG*^{2} 522 = *SIG*^{3} 958.

64. ANDROS. C 146.

65. CHIOS. B 118, C 146–7. Two further Chian subscription-lists have come to light, a fragment published by D. Evangelides (Ἀρχ. Δελτ. XI, παρ. 29, No. 14),[1] which twice contains the sum XX, and a well-preserved record, of which the heading was copied by L. Robert (*BCH* LVII 509, 536), and the whole text has been edited by J. Vanseveren (*Rev Phil* XI 321 ff.), who assigns it to the 3rd cent. B.C. It contains the following sums: X, EE (thrice), E (13 times), 𐅄 (20 times), ΔΔΔΔ, ΔΔΔ (4 times) and ΔΔ, which the editor interprets as 1000, 200, 100, etc., drachmas. I had at first (B 118) thought of golden staters, but had substituted drachmas (C 146–7) in view of the decree Ἀθηνᾶ XXVIII 158 ff. = Ἀρχ. Δελτ. II 213 ff., now more satisfactorily edited by Robert (*BCH* LVII 505 ff.).

66. SAMOS. B 118, C 146.

67. AMORGOS. B 117, C 146.

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[1] Cf. L. Robert, *BCH* LVII 509, n. 4. In ll. 9, 11, where Evangelides restores [μετὰ], we should, I think, write [καὶ] (cf. *BCH* LVII 508), or, more probably, [καὶ ὑπὲρ] (cf. *BCH* LVII 506, *Rev Phil* XI (1937) 321 f.).

68. Lemnos. B 119, C 147. *IG* XII 8. 22 is now *SIG* 1193.

69. Imbros. B 119, C 147.

70. Carystus. B 113–4, C 145.

71. Zarax (Euboea). C 145.

72. Eretria. B 114, C 145.

73. Gortyn. B 117. A puzzling Gortynian fragment, of the 4th cent. B.C., now in the Candia Museum, was published by M. Guarducci in *Riv. Ist. Arch.* III 25 f. and discussed by her in *Riv Fil* LXI 230 ff., LXV 381 ff. In her final version we find [ὀ]σσπρίον Χ -- (l. 1), Ϝοίνο Η (l. 2), [ὀ]σσπρίον Χ (l. 5), and [ἐ](λ)αίο Χ (l. 9). The editress suggests that Χ and Η may = χοῖνιξ and ἡμίχους, and this is perhaps better than to interpret them as sums of money (1000 and 100 dr.) expended on the commodities in question.

74. Crete (Κεραμέ, on S. coast). C 146.

75. Syracuse. B 125, C 150.

76. Camarina. B 125 (vase).

77. [Pompeii.] C 150. The Pompeian evidence is irrelevant for our present inquiry.

78. Phoenix (Rhodian Peraea). B 122, C 148.

79. Halicarnassus. B 122, 128. *SIG*^{2} 11 = *SIG*^{3} 46.

80. Priene. B 121–2, 128.

81. Tralles. B 122, 131. The asylum-inscription (for which cf. Franz, *Elementa Epigr. Graec.* 347 n.) is now in the Cabinet des Médailles of the National Library at Paris, and has been re-edited by L. Robert in *Collection Froehner*, I, No. 96 (where the reference to Michel should be 804 instead of 1004). Cf. W. Larfeld, *Griech. Epigr.*^{3} 292.

82. Ephesus. B 132.

83. Teos. B 121, C 148.

84. Clazomenae. C 147.

85. Erythrae. B 121, C 147–8. *SIG*^{2} 600 = *SIG*^{3} 1014.

86. Smyrna. B 121. In the relevant inscription Boeckh (*CIG* 3140) gives 𐅃Σ everywhere in place of 𐅃Ξ; that he found the latter form in his copy appears to follow from his comment '𐅃Σ nihil videtur aliud esse nisi 𐅃, cui, nisi id post aliam notam positum ut vs. 15. Δ𐅃, insertum sit Σ minutum, ne inscribi posset nota maiorem summam efficiens, ut 𐅄.' This explanation is attractive, and has been accepted by Franz and by Larfeld (*locc. cit.*), but I do not find it convincing.

87. Aegae. B 120–1, 128.

88. Pergamum. B 120, 129, C 147.

89. Cyzicus. B 120, 128.

90. [Apollonia ad Rhyndacum.] B 125, C 150. The numismatic evidence cited is proved to be irrelevant, and the name disappears from the list.

91. Chalcedon. A 27–9, B 120, C 147.

92. [Ancyra.] C 150. The frequent references to tribes in the inscriptions of Ancyra use alphabetic numerals. But the φυλὴ Δ̄Ī of *CIG* 4018 cannot be interpreted as 'fourteenth tribe,' for the phase αἱ δώδεκα φυλαί found in *IGRom* III 208 (a corrected text[1] will be found in *JHS* XLIV 26, *SEG* VI 57) proves that the total number of tribes at Ancyra was only twelve.[2] The solution of the difficulty is brought by H. Miltner's publication of an Ancyran altar bearing an inscription in which the φ[υλ]ὴ δ̄ Ἱερμηνή honours a certain T. Flavius Gaianus, a Roman knight (*ÖJh* XXX, Beibl. 23 ff.). This proves that *CIG* 4018 contains the closing lines of an inscription honouring the same man and that its opening words must be transcribed φυλὴ δ̄ Ἱερμην(ή) κτλ. Thus the only possible trace of acrophonic numerals at Ancyra disappears.

93. Canygelles (W. Cilicia). B 122, 129.

94. Aphroditopolis (Egypt). In a mutilated document recently re-edited by P. Roussel, who dates it in 57 or 56 b.c., occurs the phrase τῆι 𐅃 τοῦ Θωύθ (*Mem. Inst. Fr. Arch. Or.* LXVII 34, l. 30), which the editor translates 'le 5 du mois de Thôt.' It is clearly impossible to interpret 𐅃 here as an alphabetic numeral, and we must either accept it as acrophonic or assume an error on the part of the engraver; if mistake there

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[1] Some further corrections will be found in *ÖJh* XXX, Beibl. 26, No. 26.

[2] In *CIG* 4017. 19 ΦΥΛΗΙΙΚΑΛΑΘΗΝΑΙΑ, transcribed φυλὴ ῑ[γ̄] Καλαθηναία?, should be φυλὴ η′ Κλα(υδία) Ἀθηναία, or rather φυλὴ η′ Κλ(αυδία) Ἀθηναία (*OGI* 547), and *CIG* 4032. 9 f. should read [φυλ]ὴ ὀγδόη Κλαυδία Ἀ[θην]ạία.

be, the simplest correction would be to substitute Γ for 𐅃. In *SEG* VIII 531 the phrase appears as τῆι ι′ τοῦ Θωύθ, I do not know on what authority.

95. CYRENE. C 149–50. Strictly speaking, the Cyrenean numeral system cannot be termed acrophonic, for the signs which it employs are for the most part purely conventional in character, and it is doubtful whether even X and Δ have any acrophonic significance,[1] though I believe that M and 𐅃 have. But I cannot refrain from giving a brief account of it because of its uniqueness and its interest, and because in certain respects it comes much nearer to the acrophonic than to the alphabetic type. What I wrote in C 149 f. was based upon the interpretation, published and unpublished, given by S. Ferri (*Sull' antico sistema numerale cirenaico*, Rome, 1923, *Aegyptus* IV 172, 181 f., *AbhBerl* 1925, 5, p. 26). In 1933, however, all the relevant inscriptions were published in *Documenti Antichi dell' Africa Italiana* (= *DAI*) I 2 by G. Oliverio, who studied the values of the numerals and reached conclusions markedly different from those of Ferri. Still more recently, in May, 1939, the texts were republished in *SEG* IX 11–35, and it is by the numbers they bear in that volume that I cite them. I have thought it best to approach the evidence directly, regardless of the discussions of Ferri and Oliverio, and to form, if possible, an independent judgement. The method followed and the results attained I summarise here.

The chief evidence consists of five fourth-century inscriptions (11–15), of which four are almost perfectly preserved, engraved on three faces of a marble block unearthed in 1915 in the temple of Demeter at Cyrene. Each contains (*a*) the heading θεοί, (*b*) the names and patronymics of the three δαμιεργοί responsible for the record and of the eponymous priest of Apollo, (*c*) a list of the prices of certain καρποί (barley, wheat, pulse, grapes, figs, olives, etc.), (*d*) the amounts of the year's revenue, expenditure and balance (ἐσιόν, ἐξιόν, λοιπόν), and (*e*) a note of the honorarium (παρόρεγμα) paid to the δαμιεργοί. Nos. 16–35 are fragments of similar records of the 5th, 4th and 3rd centuries. The prices and the sums of money are all expressed by signs, but no example survives of the use of this system to represent pure numbers. An examination of such a complex as M:ʒ⊏Z>>⊐XXXXʒʒʒZ>>> shows that the same signs (in this example ʒZ and >) may recur with a higher and a lower value, but that within the 'upper scale,' and again within the 'lower scale,' the order of sequence of the signs is invariable. In the upper scale we have the sequence ʒ⊏Z>𐅃—X and in the lower ʒ⊏Z>—Δ, and we may confidently assume that this represents the descending order of value of the signs in question. The only variations of form are the occasional use of ⊐ in place of ⊏ (28–9) and of ɔ in place of > (23, 34), and the only other anomalies to be noted are (*a*) the use of Δ in 15. 9 with a value obviously different from that which it bears elsewhere, (*b*) the appearance of ΔI at the end of a complex in 17. 7, and (*c*) that of H before lower-scale ɜ in 33. 11. Having determined the order of the signs, we next inquire into the maximum number of times each may be (or, at least, is) repeated in the same value-complex, and we reach this result. In the higher scale ɜ is once duplicated (17. 4), but never ⊏Z or Γ; on the other hand >— and X are repeated up to, but never beyond, four times. In the lower scale ⊏Z and — are never duplicated, but ɜ> and Δ may be repeated four, but never five, times. In view of the large number of examples under review, we may conclude that 5Δ = —, 2— = >, 5> = Z, 2Z = ⊏, 2⊏ = ɜ, 5ɜ = X, 5X = —, 5— = Γ, 2Γ = >, 5> = Z, 2Z = ⊏, 2⊏ = ɜ. If we take Δ as the unit, we shall then have the following scale of values:

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[1] So artificial and so far removed from the Greek acrophonic systems does it seem to me to be that I do not attempt, as does Oliverio (*op. cit.* 153 ff.), to determine the external influences operative in its invention.

ɜ =	1,000,000 Δ	X =	1,000 Δ
⊏ =	500,000 Δ	ɜ =	200 Δ
Z =	250,000 Δ	⊏ =	100 Δ
> =	50,000 Δ	Z =	50 Δ
Γ =	25,000 Δ	> =	10 Δ
— =	5,000 Δ	— =	5 Δ

Can we test the correctness of our interpretation? In 15. 17–20 we have Ἐσιὸν|Mɜ⊏>>>Γ—XXɜ⊏Z>>, ἐξιὸν|M⊏>>>>Γ⚌⚌XXXɜɜɜɜZ>>,||λοιπὸν M⊏Z>>>Γ—XXXɜɜ⊏. Translating this into the values obtained above, we have 'Revenue: 1,682,370 Δ. Expenditure: 748,870 Δ. Balance: 933,500 Δ', which is arithmetically correct.[1] A like translation in 13. 10–11, 19–21 gives 1,543,762 Δ, 1,033,477 Δ and 510,284 Δ respectively, which shows a discrepancy of only 1 Δ; presumably the value-complex of l. 11 should end with Δ rather than ΔΔ, or that of l. 20 with ΔΔΔ rather than ΔΔ. A more serious discrepancy occurs in 12.12–14, where the sums are 1,511,886 Δ, 776,996 Δ and 759,890 Δ, which is 25,000 Δ too much; probably the sign Γ has been omitted at the close of l. 12 or the beginning of l. 13, or, alternatively but less probably, Γ has been wrongly inserted in l. 13. In 11. 15–17 the discrepancy is not so easily explicable, amounting as it does to 8704 Δ, but in view of the notorious inexactitude of ancient accounts[2] I retain my faith in the correctness of the present interpretation,[1] especially as I find that G. Oliverio (*op. cit.* 122 ff.) and O. Viedebantt (*ib.* 130) have independently reached the same results.

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[1] The M has no numerical value, but is prefixed to large sums (11–18, 24, 34), apparently to warn the reader that he must begin on the 'upper scale'. It may be an abbreviation of the word μνᾶ.

[2] Cf. Hiller von Gaertringen's note on *IG* IV² 1. 106. 65 'cum vero omnes fere

It remains to determine the value of Δ, and here too I agree with Oliverio (*DAI* I 2, 125):[2] Z almost certainly represents the drachma and the table of values works out thus:

ʒ = 200 minas
⊏ = 100 „
Z = 50 „
> = 10 „
𐅃 = 5 „
— = 1 m. = 100 dr.

X = 20 dr.
ʒ = 4 „
⊏ = 2 „
Z = 1 „
> = $\frac{1}{5}$ „
— = $\frac{1}{10}$ „
Δ = $\frac{1}{50}$ „

96. TEUCHIRA (Tòcra). Of the numerous epitaphs from the necropolis of Tòcra published by G. Oliverio in *DAI* II 2, two contain what at first sight appear to be acrophonic numerals; p. 161, No. 161 (= *SEG* IX 433) has Ἀρχίβιος 𐅄 and p. 178, No. 196 (= *SEG* IX 465) Τήλεφος Φ𐅄 (?).

97. The Darius Vase. B 124, C 150.

Epidauriorum calculi claudicent', and G. Glotz's remark on the Delian records in *REG* XXIII 281.

[1] In 14 we may note that l. 15 must be restored [ἐξιὸν M]ʒ, since ʒ must be the first sign of the value-complex inasmuch as, if Mʒ]ʒ were restored, the expenditure would exceed the revenue and there would be no credit balance. Further, in l. 16 we must (if we assume that here the accounts are correct) restore [λοιπὸν M⊏>>𐅃⊐⊐ʒ]⊏Z>>>, unless in l. 14 we substitute [X] for [ʒ], in which case l. 16 must be restored [λοιπὸν M⊏>>𐅃⊐⊐X]⊏Z>>>.

[2] Oliverio, however, wrongly gives 1 mina as $\frac{1}{10}$ tal. and 20 dr. as $\frac{1}{50}$ tal.; according to his own reckoning the fractions should be $\frac{1}{50}$ and $\frac{1}{250}$ respectively.

ALPHABETICAL LIST OF PLACES

The numbers refer to the numbered paragraphs of the foregoing account.

Acarnania, 36–7
Achaea, 20
Acraephia, 26
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[Ancyra], 92
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[Apollonia Mysiae], 90
Arcadia, 15–9
Argive Heraeum, 6
Argolis, 5–11
Argos, 8
Arsinoea, 33
Asia Minor, 78–93
Attica, 1
Boeotia, 22–7
Callatis, 47
Calydon, 32
Camarina, 76
Canygelles, 93
Carpathus, 54
Carystus, 70
Ceos, 63
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Chersonesus Taurica, 49
Chios, 65
Clazomenae, 84
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Corinth, 3
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Cos, 59
Cranii, 38
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Cyzicus, 89
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Dyme, 20
Egypt, 94
Elatea, 29
Ephesus, 82
Epidaurus, 11
Eretria, 72
Erythrae, 85
Euboea, 70–2
Gortyn, 73
Halicarnassus, 79
Heraea, 17
Hermione, 9
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Koutsopodi, 7
Lemnos, 68
Lesbos, 55–6
Lindus, 53
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Macedonia, 42–5
Mantinea, 16
Megalopolis, 19
Melitea, 40
Messene, 12
Messenia, 12–4
Methymna, 56
Moustenia, 45
Myconus, 51
Mytilene, 55
Naupactus, 31
Naxos, 61
Nemea, 5
Nesus, 57
Olynthus, 43
Orchomenus, 27
Oropus, 21
Paros, 62
Pergamum, 88
Phigalea, 18
Phistyum, 35
Phocis, 29
Phoenix, 78
Physcus, 30
Pieria, 45
[Pompeii], 77
Priene, 80
Remoustapha, 14
Rhamnus, 1
Rhodes, 52
Samos, 66
Sara Musa, 46
Sermyle, 44
Sicily, 75–6
Sicyon, 4
Smyrna, 86
Stratus, 36
Syracuse, 75
Tanagra, 23
Tegea, 15
Teos, 83
Teuchira, 96
Thebes, 25
Thera, 58
Thermus, 34
Thespiae, 24
Thessalonica, 42
Thessaly, 40–1
Thyrrheum, 37
Tomi, 48
Tralles, 81
Troezen, 10
Zarax, 71

MARCUS N. TOD.

JERICHO TOMB 13

THE Mycenean pottery which is often found in tombs and on inhabited sites in Palestine frequently provides useful evidence for dating purposes, and occasionally, too, the presence of Egyptian objects helps to confirm the dating of the Mycenean pottery itself.[1] Recent research, especially on the Mainland of Greece, has made clear the main lines of development of Mycenean pottery through the three periods of L.H. I, II and III[2] and consequently the comparative dates provided by the finding of such pottery on Palestinian sites may be taken as approximately correct. It is, however, essential that the Mycenean pottery or the local Palestinian imitations of it should be assigned to the correct period. Failure to do so may lead to a misdating of the Palestinian local wares or of the other objects associated with them. A case of this seems to have occurred at Jericho.

Tomb 13 at Jericho[3] contained three definite layers, *a*, *b*, and *c*. The two lower and earlier layers, *b* and *c*, do not concern us here. The uppermost and latest layer, *a*, contained with other vases three vases which though unpainted and clearly of local Palestinian fabric shew Mycenean forms. As regards them Garstang remarks, 'At first glance one feels inclined to assign the quasi-Mycenaean vases (Pl. IV, 1, 2, 5) if not all the objects in layer *a* to an advanced date in L.B.A. ii.; the photographs of a selection are reproduced as Pl. XXXII to shew their details. Certainly imitations of Mycenaean wares tending to become debased are among the most familiar and distinctive specimens in tomb groups of the 14th and even the 13th centuries B.C. both in Palestine and in Egypt. On general grounds, then, it is possible that this impression is correct and that no.'s 1, 2, and 5 (Fig. 1) at any rate represent a late intrusion, but a scrutiny of the record does not substantiate this view. The find-spots of no.'s 1, 2, and 5, *viz.* a 19, a 11, and a 10 respectively will be seen in the plan of layer *a* (*Liverpool Annals* XX, pl. II) to be dispersed among the numerous other contents of the layer from which it is not possible to dissociate them stratigraphically.'

From this it appears that the three vases of Mycenean shape are definitely part of layer *a* and cannot be separated from the other vases of it. So after a discussion of the local vases the discoverer concluded, ' Thus the general context of these Mycenaean or Cretan forms is uniformly L.B.A. i, tending in special cases towards the end of the 15th century B.C.' He then proceeded to examine the Mycenean vase shapes in question and came to the conclusion that they imitate Mycenean or Minoan vases of the fifteenth century or Thothmes III date and so support his fifteenth-century dating of stratum *a*.

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[1] *E.g.*, Hamilton, *Quart. Dept. Ant. Pal.* IV (Tell Abu Hawam).

[2] Wace, *Chamber Tombs at Mycenae*, p. 146 ff.; Blegen, *Prosymna*, p. 388 ff.

[3] *Liverpool Annals* XX p. 15 ff., pl. II.

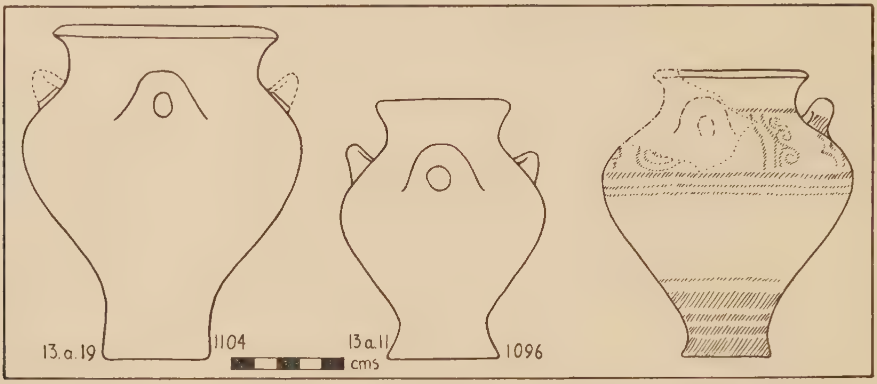

Fig. 1.—Amphorae from Tomb 13 (left and centre) and from Beisan.
(From *Liverpool Annals*, XX, p. 20.)

One of these vases (Fig. 2, centre), is a squat alabastron of the high, not the low type. This shape as shewn by the evidence of tombs excavated at Mycenae and the Argive Heraeum[1] does not appear on the Mainland of Greece[2] before L.H. III or in other words before the fourteenth century

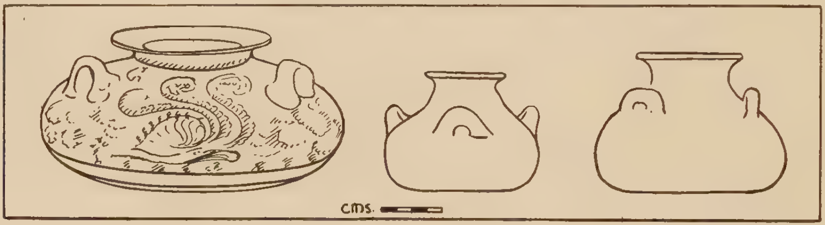

Fig. 2.—Alabastra from Phylakopi (left), Jericho, Tomb 13 (centre) and Gezer.
(From *Liverpool Annals*, XX, p. 20.)

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[1] Wace, *Chamber Tombs*, p. 171; Blegen, *Prosymna*, pp. 418, 445.

[2] The low type of squat alabastron from which this high type developed in Greece (see the intermediate forms, Wace, *Chamber Tombs*, Pls. XXVII 2, XLIII 24, LIV 2) is not a Cretan, but a Mainland shape, see Pendlebury, *Archaeology of Crete*, p. 223. Consequently the appearance of the high type of squat alabastron in Palèstine indicates not Cretan, but Mainland connections.

B.C. Garstang, however, compares the Jericho example with squat alabastra of the low type from Phylakopi and Saqqara which are definitely L.H. II in date and style.[1] The Jericho alabastron should, however, in shape be compared rather to examples from Mycenae and the Argive Heraeum which are definitely L.H. III in date and style.[2] The main difference between the L.H. II (fifteenth century) and the L.H. III (fourteenth century) shape of squat alabastron is that in the former the diameter of the base is twice the height of the vase and in the latter the diameter of the base is about equal to the height. The proportions of the Jericho vase are definitely of the latter shape and thus could hardly be dated before 1400 B.C.

The other two vases of Mycenean shape from Tomb 13 are amphorae with three horizontal loop handles (Fig. 1, left and centre), a type which is exceedingly popular in L.H. III deposits on the Mainland.[3] This type of amphora has two handle forms, a horizontal loop handle as here, or a vertical ribbon handle. The shape also in its early evolution in L.H. II on the Mainland has two varieties, (1) with a small base and wide rounded body,[4] and (2) with a slender base and body.[5] In L.H. II in both these varieties the vertical ribbon type of handle is preferred. The first variety is the commoner in L.H. II, and in L.H. III the body becomes rather less rounded. The second variety occurs also in the early stages of L.H. III and is known in Cyprus and Rhodes.[6] The popular L.H. III shape, usually called piriform, is a compromise between the two varieties, and has a slender base and a moderately large, but not so rounded a body. This L.H. III shape [7] is frequent in Rhodes, Cyprus, Syria, Egypt, and Palestine and it is this shape which the Jericho vases imitate. They have the horizontal loop handles preferred in the L.H. III variety and also in the Beisan example (Fig. 1). This Beisan vase was found there in Level IX which was originally as Garstang says [8] dated to the time of Thothmes III, but Mr. Fitzgerald kindly informs me that though that level was attributed to Thothmes III as builder it was never thought that all the pottery need be much earlier than Amenhotep III. Lately Allbright[1] has proposed a new chronological scheme for Beisan and dates the pottery of Level IX to the fourteenth century. The Beisan vase, according to the illustration given, if found in Greece would be classed as a piriform amphora of the L.H. III type and thus not dated any earlier than the fourteenth century. This independent revision of the Beisan dating by Allbright therefore agrees with what would be the Greek dating for the Mycenean vase in question.

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[1] Klio XXXII (N.F. XIV), p. 146.

[2] Wace, *Chamber Tombs*, Pls. XVII 22, XLVII 4, LI 13, 14, LVII 21, 22; Blegen, *Prosymna*, Figs. 251, 254, 402, 480.

[3] Blegen, *Prosymna*, p. 447.

[4] Cf. Wace, *Chamber Tombs*, Pls. XLI 16, L 21.

[5] Wace, *Chamber Tombs*, Pl. XXVIII 1.

[6] Blegen, *Prosymna*, Figs. 246, 260, 367, 717; Παπαβασιλείου, Ἀρχ. Τάφοι ἐν Εὐβοίᾳ, p. 30, Fig. 20; B.M. Cat. I, Pt. II, Pl. III, C. 478; *Annuario* VI–VII, p. 127, fig. 48.

[7] For the Mainland shapes see Blegen, *Prosymna*, Figs. 714–16, 718. Examples from Rhodes, Cyprus, Egypt and Palestine are illustrated, *B.M.C.* I, Pt. I, A 823–7, A 999; *B.M.C.* I, Pt. II, C 437–60; *Annuario* XIII–V p. 291, Fig. 35; *C.V.A. Copenhagen* I, Pl. 43 4–6; Grant, *Beth Shemesh*, p. 213; Grant-Wright, *Ain Shems* IV, Pl. XXXIV, 5. There are examples from Syria not yet illustrated.

[8] *Liverpool Annals* XX p. 19.

Thus on the evidence available about the evolution of the amphora shape on the Mainland of Greece and in Mycenean environments shews that the Jericho imitations can hardly be dated before 1400 B.C., a date which agrees perfectly with that derived from consideration of the alabastron.

We can conclude then that if these three vases from Jericho are to be considered as imitations of Mycenean vases, they cannot be dated as early as the fifteenth century and the date of layer *a* in Tomb 13 must be brought down accordingly. If on the other hand the local pottery in layer *a* cannot be dated later than the fifteenth century, then the three vases must be considered as anticipations and not as imitations of Mycenean shapes and they cease to have any value for dating purposes. These shapes, however, do not occur ordinarily in Palestinian pottery and these three vases are rightly regarded by Garstang as copies of Mycenean vases, especially since Mycenean ware of the Levanto-Helladic class and of L.H. III date is common in Palestine.[2] If so their value for dating purposes must be recognised by bringing down the date of stratum *a* in Tomb 13 at Jericho to the fourteenth century at least.

A. J. B. WACE.

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[1] *A.A.S.O.R.* XVII (1936–7) p. 76, § 86 (Tell Beit Mirsim II).

[2] See for instance Hamilton, *Quart. Dept. Ant. Pal.* IV (Tell Abu Hawam).

THEMISTOKLES' ARCHONSHIP

1. The Archon's Powers.

Whilst archon, in 493/2 B.C.,[1] Themistokles began his constructions at Peiraeus, which he got finished in 479/8 (Thuc. I. 93.3). On the latter occasion he persuaded (ἔπεισε) the demos: on the former he evidently acted in virtue of the archon's powers. What powers? [2]

The classical archon's functions were mainly two: to conduct certain public festivals, and to see to such lawsuits as pertained to the family. Not unimportant functions, at least not unimportant in the archaic state: when his discretion in his own court was still considerable,[3] the man who could, *e.g.*, dispose of heiresses had much power and enjoyed much confidence. But not by any means enough to account for his known importance. Aristotle, noting how eagerly the archonship was sought in the sixth century, comments ᾧ καὶ δῆλον ὅτι μεγίστην εἶχεν δύναμιν ὁ ἄρχων . φαίνονται γὰρ αἰεὶ στασιάζοντες περὶ ταύτης τῆς ἀρχῆς ('Αθ . π . 13.2). This is 'the archon,' the eponymos: of the college of nine archons, Thucydides tells us that in the seventh century τὰ πολλὰ τῶν πολιτκῶν οἱ ἐννέα ἄρχοντες ἔπρασσον (I. 126.8). He is speaking of the Kylonian curse, which we know rested most heavily on the descendants of Megakles, who was the eponymos.[4] That the classical archon has lost not only the use of his discretion in his own court, but considerable other powers of which no trace at all survived, is clear. It has been noted how this fact misled Aristotle: seeking to reconstruct the archaic archon from the functions of the archon of his own day, he was forced to the conclusion that 'the archon' was a later creation than the polemarch: a conclusion surely false.[1]

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[1] Dionys. *A.R.* 6, 34: there is little to add to Busolt's decisive note, *G.G.* II^2, p. 642 note 1. As Busolt insists, Themistokles cannot have been chosen by lot: the story I quote in my last section is an episode of his election campaign, see note 3, p. 269. He evidently became archon at about thirty, as did others, e.g. Aristeides (490/89): a relic of Tyrant policy, so we may add Miltiades in 524/3 (cf. Hdt. 6, 39, 1, ἐν 'Αθήνῃσι ἐποίευν εὖ) and I would say Peisistratos in 522/1 (*Hesperia* VIII, p. 60 no. 21 line 8: Thuc. 6.54.6 gives him as an instance of those whom the Tyrants contrived to have as archon during the tyranny, so that Meritt's date for him, *ibid.* p. 63, seems to me impossible: apart from the twelve Gods' altar, Thuc. *ibid.* and Hdt. 6. 108.4): both these must have been very young.

[2] Kahrstedt, *Magistratur* p. 88, believes (on the strength of Philochoros fr. 79*b*), that at this time the nine archons presided in Boule and Ekklesia. This, even if true, would hardly account for the Peiraeus undertaking.

[3] 'Αθ . π . 3.5.

[4] Plut. *Solon* 13.

Besides his construction in Peiraeus, Themistokles had charge, some time before 480, of a water supply. In that capacity he levied fines on people who diverted the water for their own uses, and used the money for a bronze *hydrophoros* (female, two cubits high) which he dedicated, presumably to Athena: years later, when himself an exile, he saw his hydrophoros in the temple of the Mother at Sardis, and 'whether he pitied her for being a prisoner of war,[2] or simply wished to let Athens know his influence with the King,' he asked the satrap to restore her to Athens. The story is in Plutarch, *Them.* 31.1: the satrap indignantly refused, and the bronze no doubt remained in the Metroon at Sardis. Plutarch (or his source) speaks of it as a known piece: the fact that Themistokles had once dedicated it in Athens, and in what circumstances, was no doubt temple tradition, quite likely justified by its dedicatory inscription.[3]

The constructions at Peiraeus were suspended for some years, and resumed in 482 (Thuc. *l.c.*): the provision of Peiraeus with a water supply comparable with what Peisistratos had provided for Athens was not completed till after the great Plague (Thuc. II. 48.2), perhaps by Meton (Ar. *Birds* 997 *cum sch.*): for the remains of the work, see Judeich, *Topographie*,^{2} 203. Plutarch calls Themistokles ὑδάτων ἐπιστάτης: was this also a function of his archonship? Whether as archon, or as epistates *ad hoc*, it was no doubt in his own court that the fines were imposed:[4] where perhaps, like the archaic Areopagus, he was κύριος καὶ ζημιοῦν καὶ κολάζειν, καὶ τὰς ἐκτίσεις ἀνέφερεν εἰς πόλιν (in the form of a bronze figure), though, unlike them, ἐπιγράφων τὴν πρόφασιν τοῦ ἐκτίνεσθαι.[5]

Whatever the exact procedure, Themistokles appears to have handled fines imposed in his own court with surprising freedom. The archaic archon's greater power perhaps lay in two things chiefly: the wider scope of his jurisdiction,[6] and his more absolute control of it.

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[1] Ἀθ. π. 3.3: Ledl *Studien z. älteren athen. Verfassungsgesch.* 1914 pp. 252 ff.

[2] *I.e.* the bronze was taken at the sack of Athens in 480.

[3] For the inscription, compare perhaps *IG* I^2 393: there the Tamiai appear to 'dedicate' ([ανεθεσαν]?) bronze objects which were never their own property; they had 'collected' them in their official capacity (συνλεχσαντεσ: cf. *IG* I^2 301 lines 3, 58, *et saepe*, [το επετειο *h*]ο αυτοι χσυνελεχσαμεν).

[4] Aeschines 3.14, οἱ τῶν ἔργων ἐπιστὰται πὰντες ἡγεμονίᾳ χρῶνται δικαστηρίου.

[5] Cf. Ἀθ. π. 8.4. If he used the verb ἐπιστατεῖν, it would not determine whether he was a special epistates, or the epistasia was a function of archonship.

[6] If, that is, he imposed these fines as archon.

2. Ephesis.

The decline of the archon's powers is thus described and explained in the 'Αθ. π.:

> 3.5. (the archons in the ἀρχαία πολιτεία) κύριοι ἦσαν καὶ τὰς δίκας αὐτοτελεῖς κρίνειν καὶ οὐχ ὥσπερ νῦν προανακρίνειν.
>
> 9.1. (Solon's τρία δημοτικώτατα) τρίτον δὲ ⟨ᾧ κὰι⟩ μάλιστά φασιν ἰσχυκέναι τὸ πλῆθος, ἡ εἰς τὸ δικαστήριον ἔφεσις· κύριος γὰρ ὢν ὁ δῆμος τῆς ψήφου κύριος γίγνεται τῆς πολιτείας.

Ephesis, the right of appeal, is what enabled the populus to usurp the magistrate's powers: the magistrate who once gave a final verdict, by Aristotle's time gave no verdict at all, but conducted a mere preliminary interrogation. There are two very similar passages in the *Politics*: IV. 14 (1298*a*),[1] and II. 12 (1274*a*);[2] but ephesis is not mentioned in them and the dikasterion's part in upsetting the balance is consequently conceived in questionable terms: κύριον ποιήσαντα (sc. Solon) τὸ δικαστήριον πάντων, κληρωτὸν ὄν. This is not the only respect in which the 'Αθ. π. has an exacter conception of Solon's reforms than the *Politics*. Among Aristotle's works Hesychios records περὶ τῶν Σόλωνος ἀξόνων ε̄: it seems a reasonable hypothesis that the axones existed, and were studied by Aristotle or under his direction, and that to this study the exactness of the 'Αθ. π. is due.

The word Heliaia, which Solon appears to have used for the court to which he allowed appeal (Lys. 10.16, Dem. 24.114) is, I imagine, the same as, *e.g.*, ἁλίη in Herodotos (1.125; 5.29, 79; 7.134) and αλιαια common in Peloponnesian inscriptions,[3] and means what was later called the Ekklesia. Ἔφεσις εἰς τὴν ἡλιαίαν is *provocatio ad populum*.

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[1] Τὰς ἀρχὰς περὶ μηθενὸς κρίνειν ἀλλὰ μόνον προανακρίνειν· ὅνπερ ἡ τελευταία δημοκρατία νῦν διοικεῖται τρόπον.

[2] The unfavourable view of Solon: he did not keep a good balance, but found the aristocratic–oligarchic element in existence (viz. archons and Areopagus) and upset it by his democratic invention, the dikasterion. Ephialtes, Perikles, etc., developed this evil element, and so τὴν πολιτείαν εἰς τὴν νῦν δημοκρατίαν κατέστησαν.

[3] Cf. Schwyzer, *dial. gr. exempla epigr. pot.* 83 B.24, 90.2, 91.2, 92.2 (Argos); 99.2 (Mycenae); 666.6 (Orchomenos); 656.24 (Tegea, αλιασται). I write Heliaia, since it seems pedantic to change so familiar a word, but I imagine Eliaia is the true form. It has no aspirate in Attic inscriptions: *IG* I^2, 39.75, Meritt and West, *Ath. Ass.* p. 44 line 14, cf. *BSA* XXXIII, p. 121 line 40: nor does αλιαια in the aspirated Argive inscription, Schwyzer 83 B.24, nor αλια in the Delphic, Schwyzer 323 A.21.

3. DEFINITIONS OF TERMS.

What was the effect of *ephesis*? It converted the magistrate's interrogation (*anakrisis*) from a final adjudication into a mere preliminary: it converted the magistrate from a judge into a mere *eisagogeus*, a 'conveyer.' It did not do these things at once: before seeking to trace the stages, I would like to offer definitions of the terms.

Ephesis, not exactly 'appeal,' since it could be automatic,[1] means the referring of a case from one tribunal to another. In classical Attic law it is automatic so far as the archon and thesmothetai are concerned: any case which comes before an archon, if admitted at all, must be judged by a heliastic court. Consequently, the archon's interrogation (anakrisis) is no longer a real trial, and he gives no verdict: he merely acts as 'conveyer' (eisagogeus) and conveys the case to the heliaia. But ephesis is not always automatic even in classical procedure. The public arbitrators (diaitetai), who in conjunction with the deme-dikasts (or 'the 40') handled a high proportion of Attic lawsuits, could offer a verdict which the parties might accept: only if one party appeals (ἂν ὁ ἕτερος ἐφῇ τῶν ἀντιδίκων, 'Αθ. π. 53.2) does the case come before heliasts: if there is no appeal, the case is finished (ἔχει τέλος ἡ δίκη, *ibid.*). And some non-heliastic verdicts were not appealable: the deme-dikasts (who are normally mere eisagogeis, like the archons) could pronounce verdicts involving not more than 10 dachmas, and no appeal lay (μέχρι δέκα δραχμῶν αὐτοτελεῖς εἰσι δικάζειν, 'Αθ. π. 53.1). More important were the equally unappealable verdicts pronounced in certain cases by the Areopagus.

It is not known when ephesis became automatic—indeed, that is the crux of the inquiry: but I take it as certain that Solon did not make it so, that Solon's ephesis was real 'appeal.'

Anakrisis, the magistrate's 'interrogation,' is a form of judicial inquiry which (so soon as ephesis became automatic) became a mere preliminary to the real trial in the Heliaia: this is προανακρίνειν. The magistrate then does not even offer a verdict: his only discretion is to decide whether to refuse the case or not.[2] But ἀνακρίνειν does not, without προ-, have any necessary notion of preliminariness. If ephesis is not automatic, the magistrate will offer a verdict which the parties may or may not accept: the diaitetai do this (see above, under *Ephesis*), and their interrogation is no doubt an anakrisis (cf. Isaios 5.32, ἀνακρίναντες ἡμᾶς πολλάκις οἱ διαιτηταί).

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[1] Bonner and Smith *Administration* II 1938 p. 232: 'If the *ephesis* depends upon the volition and action of the losing party in the original proceedings, it is to all intents and purposes an "appeal" as it is known in Anglo-American law and practice. But if the *ephesis* is required by law, it is in no sense an appeal.'

[2] Εἰ ὅλως εἰσάγειν χρή (Harpok. ἀνάκρισις). This represents the classical practice.

The dokimasia of magistrates by the Boule was an anakrisis (Lipsius, Att. Recht II, p. 272), and originally was not appealable, νῦν δ' ἔφεσίς ἐστιν εἰς τὸ δικαστήριον ('Αθ. π. 55.2). I think it possible that an Areopagite trial is, in fact, an anakrisis: in their special sphere, the classical Areopagites, like the archaic archons, still αὐτοτελεῖς κρίνουσι καὶ οὐ προανακρίνουσι.

But in all cases which came before the archon or the thesmothetai, ephesis was automatic in classical Athens, and the anakrisis consequently a mere pro-anakrisis, carrying no verdict appealable or otherwise.

By an *Eisagogeus* I mean [1] any magistrate who conducts an anakrisis, and then, as a result of ephesis, 'conveys' the case to the heliasts. The eisagogeus will preside in the heliastic court to which the case comes: he is thus the same as a ἡγεμὼν δικαστηρίου (Aeschines 3.14, 29).[2] The classical archon is a 'mere' eisagogeus, he offers no verdict at his anakrisis, and reveals no opinion or bias whilst presiding in his heliastic court: for how he should behave, see Lysias 15.3–4.

I will use the terms ephesis, anakrisis, eisagogeus, as defined above. I will also speak of the heliastic trial which follows an anakrisis, as an '*eisagoge*.' The use of the word is perhaps justified by Isaios 4.12 (see Appendix); it is at least convenient.

We have, then, in the normal lawsuit, two judicial inquiries, the anakrisis and the eisagoge, both conducted by the eisagogeus. They are separated by the ephesis, which is automatic, and results in there being no verdict in the former, and the verdict of the latter being final.

4. THEMISTOKLES.

Wilamowitz truly says that Athena in the *Eumenides* appears as the foundress of the Heliaia rather than of the Areopagus (*Ar. und Ath.* 334). After the anakrisis in 397–488, she declines of her own volition to give a verdict: in a case involving such passion, one person's judgment cannot satisfy, she needs the comfort of numbers (470–9). In the succeeding eisagoge (482 ff.) she behaves as Lysias demands an eisagogeus shall (15.3–4), not pleading for Orestes until the voting is over (734–41).

Had the system of eisagoge received some expansion in the reforms which shortly preceded the *Eumenides*? Was it Ephialtes who made ephesis automatic, and converted the archon from a judge into an eisagogeus? The presentation of Athena as an eisagogeus is, of course, no proof of this; but is there in fact any more likely date? It cannot, surely, have been later: that it was not very much earlier (not, *e.g.*, as early as Kleisthenes) is perhaps indicated by a small piece of evidence with which I will cope my edifice of conjecture.

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[1] For justification of this usage, see the last paragraph of the Appendix.

[2] The reading in *IG* I^2 41.1, [h]ο hεγ[εμον], is extremely doubtful.

Plutarch tells a story of Themistokles; *Aristeides* 2.5: πρὸς τὸν εἰπόντα καλῶς ἄρξειν αὐτὸν Ἀθηναίων ἄνπερ ἴσος ᾖ καὶ κοινὸς ἅπασι ‘μηδέποτε’ εἰπεῖν ‘εἰς τοῦτον ἐγὼ καθίσαιμι τὸν θρόνον ἐν ᾧ πλέον οὐδὲν ἕξουσιν οἱ φίλοι παρ’ ἐμοὶ τῶν ἀλλοτρίων.’[1]

There can be little doubt that καλῶς ἄρξειν Ἀθηναίων means ‘be a good archon of Athens.’ In stricter idiom this should be Ἀθηναίοις: Herod. 5.51 Καλλιάδεω ἄρχοντος Ἀθηναίοισι (480/79): Thuc. 1.93.3 (of Themistokles) ἐπὶ τῆς ἐκείνου ἀρχῆς ἧς κατ’ ἐνιαυτὸν Ἀθηναίοις ἦρξε: 2.2.1, Πυθοδώρου ἔτι δύο μῆνας ἄρχοντος Ἀθηναίοις (432/1): 6.54.6, ἦρξαν τὴν ἐνιαύσιον Ἀθηναίοις ἀρχήν: Simonides 77 (Diehl),

ἦρχεν Ἀδείμαντος μὲν Ἀθηναίοις ὅτ’ ἐνίκα
    Ἀντιοχὶς φυλὴ δαιδάλεον τρίποδα (477/6):

IG I^{2} 220/2, ερχε δε Αθηναιοισ Αριστιον (421/0): IG II. 5, 2544*b*,[2] Καλλιασ Σκαμβωνιδησ

ηρξας Αθηναιοισι Δικαιοσυνην δε παρεδρον
    Καλλια εκτησω δαιμονα σεμνοτατην (412/1).

But I think we must impute the genitive to Plutarch's own style: the parallel version (note 1) has ἄρξει alone, as in Dem. 21.178, τοῦ βελτίστου Χαρικλείδου, τοῦ ἄρξαντος (363/2). ‘Sitting on the throne’ is going to be an important part of his function; that can hardly mean other than sitting in court,[3] and though, *e.g.*, a strategos sometimes sat in court, it was not his typical function: it was the archon's.

Themistokles is encouraged, then, to shew himself impartial when he occupies the archon's chair: he replies that he would be ashamed not to have helped his friends. Now, in classical Athens an archon's opportunities for graft were few: that no doubt explains the great reputation of the body of ex-archons, the Areopagus. But before ephesis was made automatic, the opportunities were more: Ephialtes was able to get many Areopagites condemned περὶ τῶν διῳκημένων, which may well include their behaviour as archons. The story, then, is out of colour for classical Athens, but may well be in colour for the time before Ephialtes: I would take this as a token of authenticity: not that Themistokles ever used those witty and shocking words (though I would not deny this obstinately); rather, that it is a contemporary comment on his behaviour.

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[1] Also in *Praecepta ger. reip.* 13 (807*b*). The variants are hardly material: πρὸς τὸν ἀποφηνάμενον ὡς ἄρξει καλῶς ἴσον ἅπασι παρέχων ἑαυτόν — εἴς τοιοῦτον . . θρόνον — τῶν μὴ φίλων.

[2] I owe this reference to Mr. Tod.

[3] For θρόνος, see G. M. A. Richter *Ancient Furniture* 3 ff. It means simply a fine chair, but especially a chair of honour. As a judge's chair, Hdt. 5. 25, τὸν θρόνον ἐς τὸν ἵζων ἐδίκαζε, and μεμνῆσθαι ἐν ᾧ κατίζων θρόνῳ δικαζει (Persia); Aesch. *Eum.* 511–2, ὦ Δίκα ὦ θρόνοι τ’ Ἐρινύων. King's chair (and so, ‘office’), Soph. *Ant.* 166; cf. Aesch. *Prom.* 909–12, ἐκ τυραννίδος θρόνων τ’, and ἣν ἐκπίτνων ἠρᾶτο δηναιῶν θρόνων (Zeus and Kronos). In the Parthenon frieze, I conceive that Zeus alone sits on a thronos, the other gods on diphroi: and thus I imagine Παλλάς, οἵ τ’ ἐφήμενοι, in *Eum.* 629. The tamias Alkimachos sits on a diphros: Acropolis no. 629 (Payne and Young *AMS* Pl. 118, 3–5) with *IG* I^{2} 548 + 663, cf. *JHS* 58 p. 217. Κάθημαι = δικάζω, Theognis 1281.

In 493 there were two famous trials. Early in the year, Phrynichos the poet was condemned for a breach of the peace, after the performance of his 'Fall of Miletos.' Later the same year (but under the new archon?) Miltiades was acquitted on a charge of 'tyranny'. It was a moment when public policy was in the balance. Phrynichos had stressed the disgrace of the attempted appeasement of Persia, Miltiades (an escaped rebel) was sure to press for war: both were dangerous to those who still hoped for peace. Herodotos tells us that the acquittal of Miltiades was seen to agree with the popular vote, when Miltiades was made strategos.[1] He might have added that the condemnation of Phrynichos [2] was seen as clearly to disagree with it, when Themistokles was made archon.

The courts could still give judgments which might, or might not, agree with popular sentiment: the trials were still anakriseis, ephesis was not automatic, cases did not necessarily come to the Heliaia. One may wonder why Phrynichos did not appeal: perhaps, since it concerned the discipline of the Dionysia, it lay peculiarly in the archon's competence (cf. Dem. 21.179, more than a century later). But we may believe it was a *cause célèbre*, and a matter of scandal and indignation. That I conceive is the setting of Plutarch's story. Themistokles is talking with his backers [3] and one of them says 'No more scandals when you are archon: you will be fair.' 'Fair? I'll be better than fair, I'll make certain the right side wins.'

I have said I doubt if Themistokles used those words. No man was better qualified, by that creative quickness which Thucydides admired (which makes me glad to dedicate a study of him to the scholar we are honouring), to have done so: but I fancy it is *post eventum*, though close to the event. For surely the trial of Miltiades is glanced at: he was the friend whom Themistokles would be ashamed to go home without having acquitted.[1] The gay words reveal the clear sight and firm purpose of the man whose nerve and wit saved Athens and Greece and Europe: *non vero ma ben trovato.*

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[1] 6.104.2, αἱρεθείς ὑπὸ τοῦ δήμου, evidently for 492/1. There is no reason to think this refers to the election of 490; Miltiades is evidently strategos continuously, from his return to his death.

[2] 6.21.

[3] Plut. *Arist.* 2.5, εἰς ἑταιρείαν ἐμβαλὼν ἑαυτὸν εἶχε πρόβλημα καί δύναμιν οὐκ εὐκαταφρόνητον, ὥστε καί πρὸς τόν εἰπόντα καλῶς ἄρξειν αὐτόν etc. For clubs in elections, Thuc. 8.54.4, Calhoun, *Athenian Clubs*, 127 ff. In 'Αθ. π. 20.1. ἡττώμενος ταῖς ἑταιρείαις ὁ Κλεισθένης meant in fact that Isagoras was elected archon.

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Appendix: εἰσάγειν δίκην.

The function of an eisagogeus is εἰσάγειν δίκην, but there has been some confusion about this phrase. Liddell & Scott distinguish εἰσ. δίκην from εἰσ. τινά, but say the former is used of the *prosecutor*: the examples cited are, however, either of the eisagogeus (*Eum.* 580, 582; *P. Hal.* I, 125 etc.) or else not of δίκην (Dem. 24.10, where the object is νόμον; here, as often in παρανόμων cases, the νόμος is spoken of as if it were the defendant). Conversely, Plat. *Laws* 910*e*, cited under εἰσ. τινά, is of the eisagogeus and the object is δίκην. The distinction between εἰσ. δίκην and εἰσ. τινὰ is overlooked by Lipsius, *Att. Recht*, 978, Add. to p. 55 note 6, and Busolt-Swoboda, *Gr. Staatsk.* 966^4, 1031^3, 1152^1: even Kahrstedt, whose treatment of the εἰσάγουσα ἀρχή (= eisagogeus) is generally satisfactory, says, *Magistratur*, p. 203 note 3, ‘ gelegentlich sagt man εἰσάγειν auch von der Partei ’: this is false of εἰσ. δίκην, while of εἰσ. τινὰ it is true not gelegentlich, but habitually.

We may formulate: εἰσ. δίκην (γραφήν, εὔθυναν, etc.) is invariably of the eisagogeus, and in this usage δίκην is frequently omitted (*e.g.*, *Eum.* 580, *IG* I^2 65 lines 46–7 = Meritt etc. *Ath. Trib. Lists* D8, 47–8): this is too common to need many instances: *e.g.*, Antiph. 6. 42, Lys. 15. 3, Ἀθ. π. 45. 1, 48. 5, etc. Εἰσ. τινά is normal of the prosecuting party: Antiph. 6. 38, Andok. 1. 135, Lys. 13. 36, Isaios 3. 3, 5. 12, Dem. 24. 10 (νόμον), Ἀθ. π. 29. 4, Plat. *Gorgias* 521*c*, *Laws* 958*c*, *Apol.* 24*d*, 25*d*, 26*a*, 29*d*, Ar. *Pol.* 6. 5 (1320*a*), *IG* I^2 84 line 29: but is said of an eisagogeus in certain circumstances, *e.g.*, regularly of the Eleven (*e.g.*, Ἀθ. π. 52. 1, Dem. 24. 105), who were eisagogeis (Ar. *Wasps* 1108, Lys. 15. 3, Harpokr. Παράβυστον), but who also had charge of the defendant's person; so perhaps the Hipparch in Xen. *Hipparch.* I, 9–10 (cf. Dem. 39. 17); the Logistai, Dem. 18. 117.

I base my use of the term *eisagogeus* (for any magistrate who εἰσάγει δίκην) on Dem. 35. 33: οἱ δὲ νόμοι καί τούτων διδόασι τάς παραγραφὰς ἀντιλαγχάνειν περί ὧν οὐκ εἰσίν εἰσαγωγεῖς. Cf. Bekker *An.* I, p. 246, εἰσαγωγεῖς ἦσαν ἑκάστου δικαστηρίου οἱ ἄρχοντες οἵ εἰσῆγον αὐτοῖς τὰς δίκας. I use *eisagoge* for a case so brought (a δίκη εἰσαγομένη, Lys. 15. 3): I can only cite Isaios 4. 12, ἐν μόναις δὲ ταῖς τῶν κλήρων εἰσαγωγαῖς ‘ only in probate cases.’

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[1] Miltiades was accused of ‘ tyranny ’: this was presumably a charge analogous to δήμου κατάλυσις and would, later, have come before the Thesmothetai. But while the magistrate still had discretion, and such cases were consequently worth hearing, I imagine the archon took his pick.

RULES AND REGULATIONS

OF THE

BRITISH SCHOOL AT ATHENS.

OBJECTS OF THE SCHOOL.

I. The first aim of the School shall be to promote the study of Greek archaeology in all its departments. Among these shall be (i) the study of Greek art and architecture in their remains of every period; (ii) the study of inscriptions; (iii) the exploration of ancient sites; (iv) the tracing of ancient roads and routes of traffic.

II. Besides being a School of Archaeology, it shall be also, in the most comprehensive sense, a School of Classical Studies. Every period of the Greek language and literature, from the earliest age to the present day, shall be considered as coming within the province of the School.

III. The School shall also be a centre at which information may be obtained and books consulted by British travellers in Greece.

IV. For these purposes a Library shall be maintained of archaeological and other suitable books, including maps, plans, and photographs.

THE SUBSCRIBERS.

V. The following shall be considered as Subscribers to the School:—

(1) Annual Subscribers of £1 and upwards during the period of their subscription.
(2) Persons not Corporate Bodies, who pay the sum of not less than £10 to the general funds of the School and are to be considered as compounding thereby for life for an Annual Subscription of £1.
(3) Persons not Corporate Bodies, who pay the sum of not less than £20 to the general funds of the School and are to be considered as thereby compounding for life for an Annual Subscription of £2 entitling them to privileges of VI (*b*).

VI. (*a*) Subscribers of £1 annually, and persons who have compounded as prescribed in V (2) to the general funds shall be allowed to purchase the *Annual* at a reduced rate of £1.

(*b*) Subscribers of £2 or more annually, and persons who have compounded as prescribed in V (3) and upwards to the general funds of the School, shall receive the *Annual* free of charge.

(*c*) All Subscribers shall be entitled to receive the Annual Report and the Director's Annual Survey "Archaeology in Greece" and to attend public meetings of the School, and (when visiting Athens) to use the Library.

Subscribers resident in Athens who desire to make use of the Library shall pay a subscription of not less than £2 2*s*.

VII. A Corporate Body subscribing not less than £50 a year, for a term of years, shall, during that term, have the right to nominate a member of the Managing Committee.

VIII. A Meeting of Subscribers shall be held annually after the close of the School's financial year, at which each Subscriber shall have one vote. A subscribing Corporate Body may send a representative. At this Meeting a report from the Managing Committee shall be presented, including a financial statement and selections from the reports of the Director and Students for the season. At this Meeting shall also be annually elected or re-elected the Honorary Officers of the School, the Auditors, and two members of the Managing Committee, in place of those retiring under Rule XIV.

IX. Special meetings of Subscribers may, if necessary, be summoned by the Managing Committee.

THE TRUSTEES.

X. The property of the School shall be vested in three Trustees, who shall be appointed for life, except as hereinafter provided. Vacancies in the number of Trustees shall be filled up at the Annual Meeting of the Subscribers.

XI. In the event of a Trustee becoming unfit or incapable of acting, he may be removed from his office by a majority of three-fourths of those present at a special meeting of Subscribers summoned by the Managing Committee for that purpose, and another Trustee shall by the same majority be appointed in his place.

XII. In the event of the death or resignation of a Trustee occurring between two Annual Meetings, the Managing Committee shall have the power of nominating another Trustee to act in his place until the next annual meeting.

THE ADVISORY COUNCIL.

XIII. There shall be an Advisory Council, unlimited in number and composed of:—

(1) The President and a number of Vice-Presidents elected or re-elected annually by the Subscribers.
(2) The Trustees and Honorary Officers of the School.
(3) Members appointed ex officio: viz., H.M. Minister at Athens, the Chairman of the British Council, and such others as the Subscribers shall from time to time determine.
(4) Members nominated by Corporate Bodies subscribing £50 a year or more, as in VII.
(5) Members elected by the Subscribers at the annual meetings.
(6) Members co-opted by the Managing Committee subject to confirmation by the Subscribers at their next Annual Meeting.

THE MANAGING COMMITTEE.

XIV. There shall be a Managing Committee composed of:—

(1) The President and Vice-Presidents.
(2) The Trustees and Honorary Officers.
(3) The nominated members of the Council.
(4) Eight members of the Council appointed by the subscribers. Two of these members to retire each year and not to be eligible for reappointment to the Managing Committee in that year.

XV. The Committee shall have control of all the affairs of the School, and shall decide any dispute that may arise between the Director and Students. They shall have power to deprive any Student of the use of the School premises.

XVI. The Committee shall meet as a rule once in every two months during the School session; but the Secretary may, with the approval of the Chairman and Treasurer, summon a special meeting when necessary.

XVII. Due notice of every meeting shall be sent to each member of the Committee by a summons signed by the Secretary. Three members of the Committee shall be a quorum.

XVIII. In case of an equality of votes, the Chairman shall have a second or casting vote.

XIX. In the event of vacancies occurring among the Officers or on the Committee between the annual elections, they may be provisionally filled up by the Committee until the next annual meeting.

HONORARY STUDENTS AND STUDENTS.

XX. The Students shall consist of the following:—

(1) Graduate Holders of travelling fellowships, studentships, or scholarships at any University of the British Empire.
(2) Travelling Students sent out by the Royal Academy, the Royal Institute of British Architects, the Byzantine Research and Publication Fund, or other similar bodies.
(3) Other persons who satisfy the Managing Committee that they are duly qualified to be admitted as Students.

XXI. No person, other than a student of the British School at Rome or the Florence Student of the Royal Institute of British Architects, shall be admitted as a Student who does not intend to reside at least three months in Greek lands. In the case of Students of the British School at Rome, an aggregate residence of four months at the two Schools will be accepted as alternative to three months' residence in Greece. The Managing Committee may also grant the privileges of a Student to other persons for a shorter period.

XXII. Students attached to the School will be expected to pursue some definite course of study or research in a department of Hellenic studies, and to write in each season a report upon their work. Such reports shall be submitted to the Director, shall by him be forwarded to the Managing Committee, and may be published by the Committee if and as they think proper.

XXIII. Intending Students are required to apply to the Secretary. The School Session shall be from November 1st to July 1st. Students shall only be granted admission for one session at a time. They shall be regarded as Students from the date of their admission by the Committee to the 31st day of October next following; but any Student admitted between July 1st and October 31st in any year shall continue to be regarded as a Student until October 31st of the following year.

XXIV. The Managing Committee may elect as Honorary Students of the School such persons as they may from time to time deem worthy of that distinction. Honorary Students enjoy all the privileges of Students without payment of admission charges, but pay the same rates as Students if they reside or mess in the Hostel.

XXV. Honorary Students, Students, and Associates elected before 1936 shall have a right to use the Library of the School and to attend all lectures given in connexion with the School, free of charge.

XXVI. Students shall be expected to reside in the Hostel, except with the sanction of the Director. Priority of claim to accommodation in the Hostel shall be determined by the Committee.

See also under Rules XXVII–XL, XLIV–XLVI.

THE DIRECTOR.

XXVII. The Director shall be appointed by the Managing Committee, on terms which shall be agreed upon at the time, for a period of not more than three years. He shall be eligible for re-election.

XXVIII. He shall have possession of the School-building as a dwelling-house.

XXIX. It shall be his duty (1) to guide and assist the studies of Students and Associates of the School, affording them all the aid in his power, and also to see that reports are duly furnished by Students, in accordance with Rule XXII, and placed in the hands of the Secretary before the end of June; (2) to edit the School *Annual*.

XXX. Public Meetings of the School shall be held in Athens during the season, at which the Director and Students of the School shall read papers on some subject of study or research, and make reports on the work undertaken by the School.

XXXI. He may at his discretion allow persons, not Students of the School, to use the Library and attend the public meetings and lectures of the School.

XXXII. He shall be resident at Athens from the beginning of November in each year to the end of the following June, but shall be at liberty to absent himself for short periods for purposes of exploration or research. He shall visit Knossos at least once in each session and shall report to the Committee as to the management of the property.

XXXIII. At the end of each season he shall report to the Managing Committee—(i) on the studies pursued during the season by himself and by each Student; (ii) on the state of the School-premises and the repairs needed for them; (iii) on the state of the Library and the purchases of books, &c., which he may think desirable; and (iv) on any other matter affecting the interests of the School.

XXXIV. In case of misconduct the Director may be removed from his office by the Managing Committee by a majority of three-fourths of those present at a meeting specially summoned for the purpose. Of such meeting at least a fortnight's notice shall be given.

See also under Rules VIII, XV, XXII, XXVI, XXXVI–XXXVII, XXXIX, XLIII–XLV, LI–LII.

THE ASSISTANT DIRECTOR AND LIBRARIAN.

XXXV. The Assistant Director shall be appointed by the Managing Committee, on terms which shall be agreed upon at the time, for a period of not more than three years. He shall be eligible for re-election.

XXXVI. It shall be his duty, subject to the Director's approval and control, to take charge of the Library and to be responsible for the Hostel, and otherwise help in the management of the School.

RULES FOR THE MACMILLAN HOSTEL.

XXXVII. The Director shall have power to exclude a Student from the Hostel in case of misconduct; but such exclusion must be immediately reported to the Managing Committee.

XXXVIII. Every Student shall pay an admission charge of £3 3*s*. per session to the *Secretary*, 50 *Bedford Square*, *London*, *W.C.*1, before leaving for Greece, and no Student will be entitled to accommodation in the Hostel until this fee has been paid. The rent charges in the Hostel are:—

3/- per single room per night.
2/6 ,, share in a double room per night.

These payments include light and servant's wages. Students are also required to pay their messing.

XXXIX. Honorary Students, Associates, Members of the Committee, and ex-Directors may be admitted to residence in the Hostel. Other persons, if seriously engaged in study or research, may be admitted by the Director at his discretion. But no person shall reside in the Hostel under this rule to the exclusion of any Student desiring admission.

XL. Persons granted Student privileges under Rule XXI shall pay an admission charge at the rate of £2 for the first month, or part of a month, of residence (payable before leaving for Greece), and £1 for each succeeding month. If admitted to the Hostel they shall pay, for rooms and other charges, the same rate as students.

See also under Rules XXI, XXVI, XLIV, XLV.

KNOSSOS.

XLI. The Archaeological Curator at Knossos shall be appointed[1] by the Managing Committee for a period of not more than three years. He shall be eligible for re-election.

XLII. It shall be his duty

(1) to reside generally at Knossos in quarters assigned to him by the Managing Committee, for eight months in each year, normally from November 1st to June 30th. Residence is deemed to include periods of travel in Crete, and occasional visits to other parts of Greece. The upper rooms and the kitchen of the Taverna are assigned to the Curator for his personal use.

(2) to undertake the care and management of the School's estate and archaeological area and be responsible for their maintenance in good repair.

XLIII. He shall hold, with regard to the Director of the School, the same position as the Assistant Director. The Director of the School has general authority in questions of policy, but the Curator is at all times responsible for administration.

XLIV. Students residing at the Villa Ariadne or Taverna, shall pay to the Villa Account the same charges as in the Hostel at Athens. Special arrangements may be made with regard to Students and others engaged in an excavation of the School.

The total number of Students, persons with Students' privileges and other persons admitted on recommendation of the Director, residing at the same time at Knossos, shall not exceed seven, of whom not more than five shall be admitted at the same time to residence in the Villa.

See also under Rule XLIX, LII.

RULES FOR THE LIBRARY.

XLV. The Director shall have power to make regulations for the management of the Library, its use by Students, and the like, subject to the approval of the Managing Committee.

PUBLICATION AND ARCHAEOLOGICAL WORK.

XLVI. No publication whatever, respecting the work of the School, shall be made without the previous approval of the Committee. The Committee of the School shall have the first claim upon any written work done by a Student from material collected during the tenure of a Studentship at the School or with the aid of a grant from the School, and also upon the reports of excavations conducted under an official permit obtained through the School. No such work may be published elsewhere than in the *Annual* of the School without the previous consent of the Committee; always provided that such consent shall not be unreasonably withheld.

XLVII. The Managing Committee incurs no financial liability of any kind, except by specific resolution, in regard to archaeological work under the auspices of the School (excavation and work resulting therefrom, publication, etc.) undertaken by an Officer or Student of the School or any other person.

THE FINANCES.

XLVIII. All money received on behalf of the School beyond what is required for current expenses shall be invested in the names and at the discretion of the Trustees.

XLIX. The banking account of the School shall be placed in the names of the Treasurer and Secretary, who shall sign cheques jointly.

L. The first claim on the revenue of the School shall be the maintenance and repair of the School premises in Athens and Knossos (Villa Ariadne and Taverna), and the payment of rates, taxes, and insurance.

LI. The second claim shall be the salaries of the Director and other officials of the School, as arranged between them and the Managing Committee.

LII. The Director shall submit annually, together with his report to the Managing Committee, estimates of expenditure for the following Session showing under the appropriate heads the amounts needed for the maintenance and repair of the School premises at Athens and Knossos, for the Library, and for excavations. These estimates shall be examined and approved by the Committee, and the Director shall report on any excess of expenditure over these. No extraordinary expenditure shall be incurred without a special resolution of the Managing Committee.

Revised October 1938.

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[1] Subject to the approval of Sir Arthur Evans.

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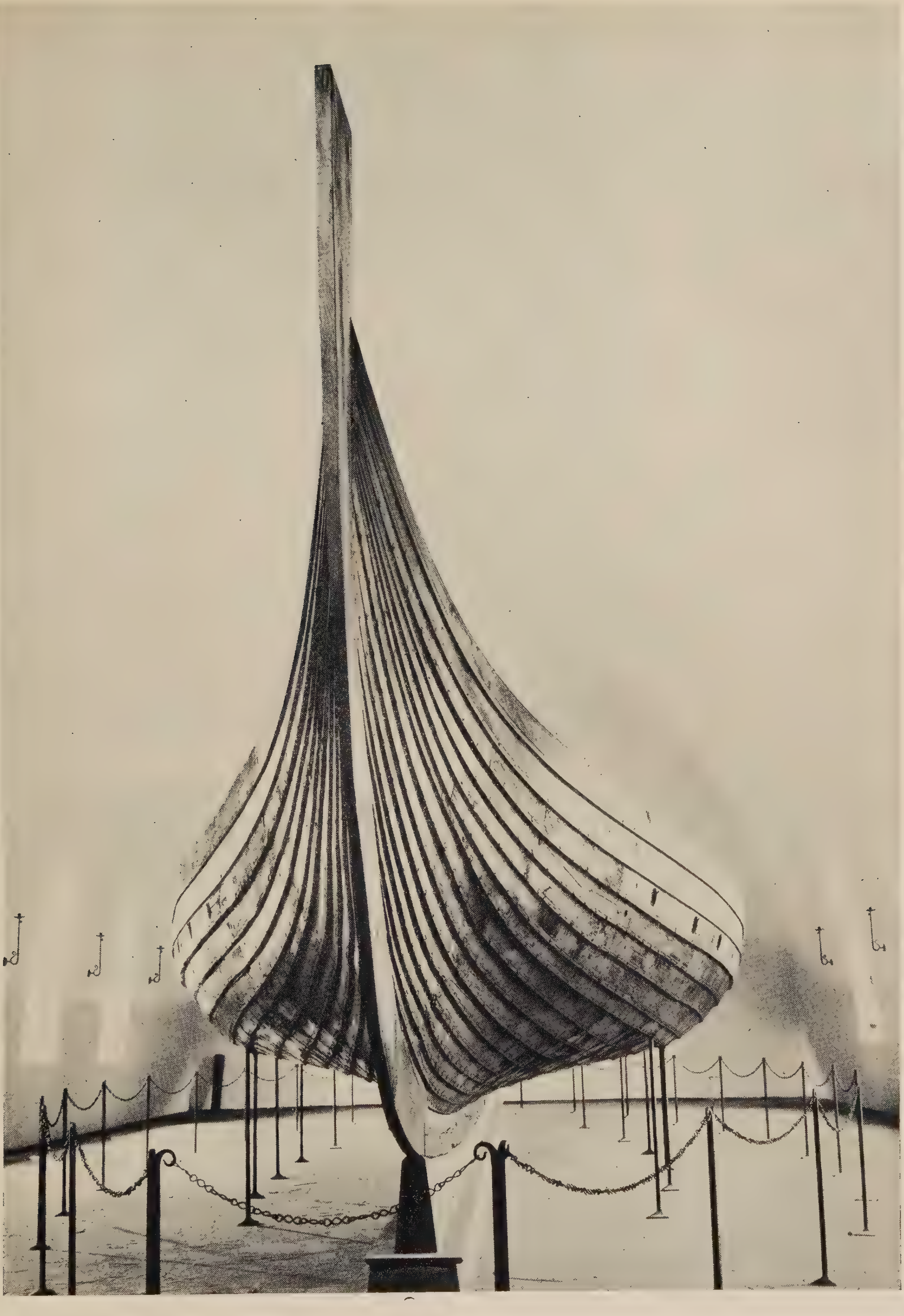
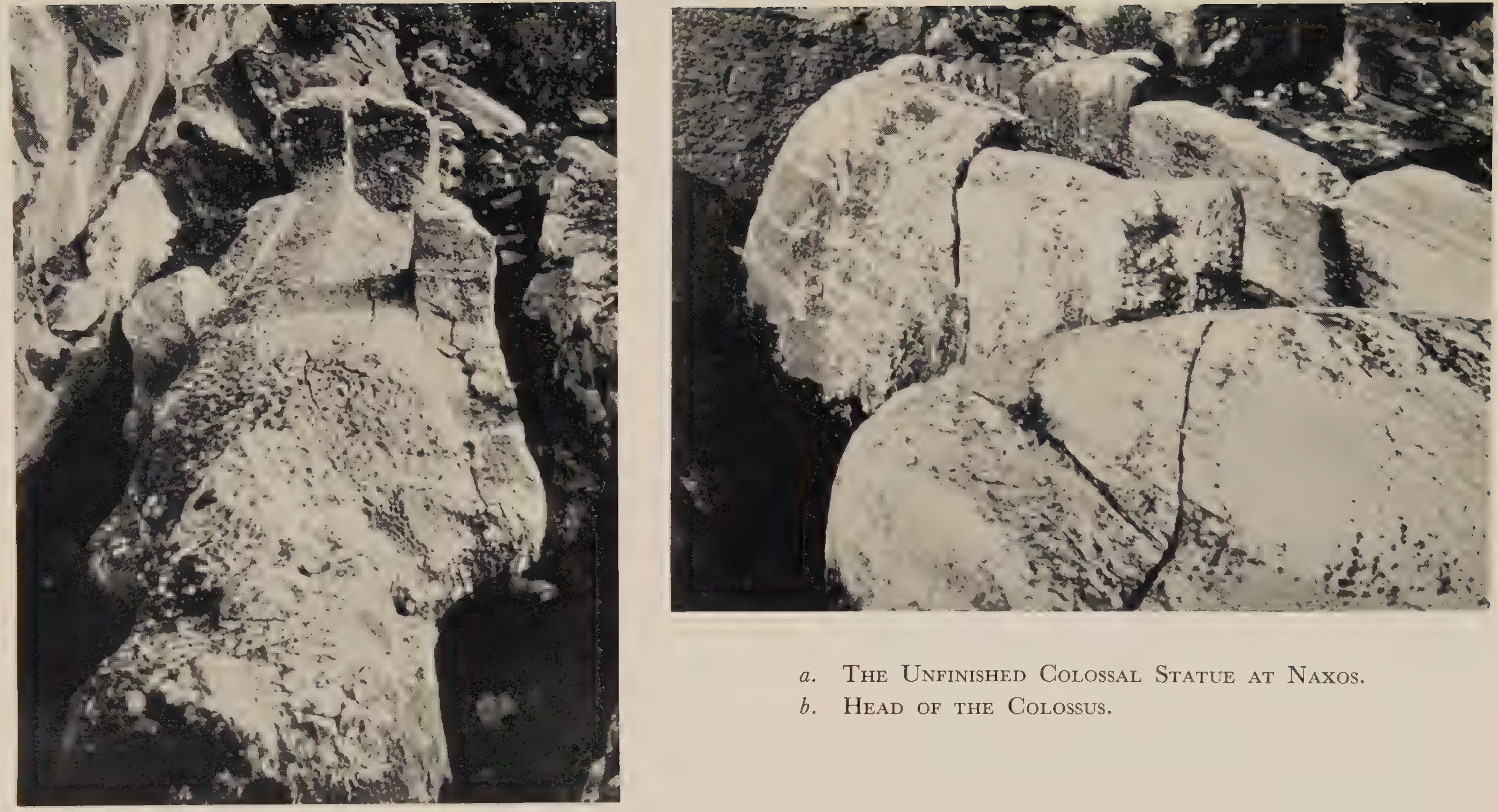
i, v, 20 . . . . . 5 n.
Oec.
xvii, 10 209
xix, 9 210
xix, 17 211

Printed in Great Britain by
Richard Clay and Company, Ltd.,
Bungay, Suffolk.



THE VIKING SHIP FROM GOKSTAD, NORWAY.
Built about A.D. 900. Excavated 1880. (University Museum of Antiquities, Oslo.)

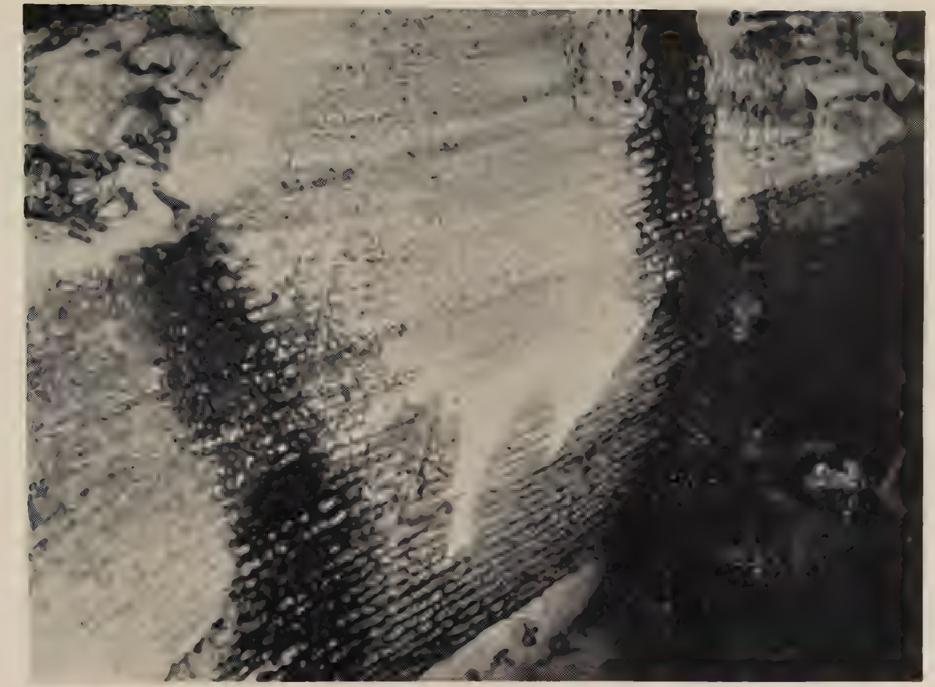
PLATE 2.



a.

b.

a. The Unfinished Colossal Statue at Naxos.
b. Head of the Colossus.

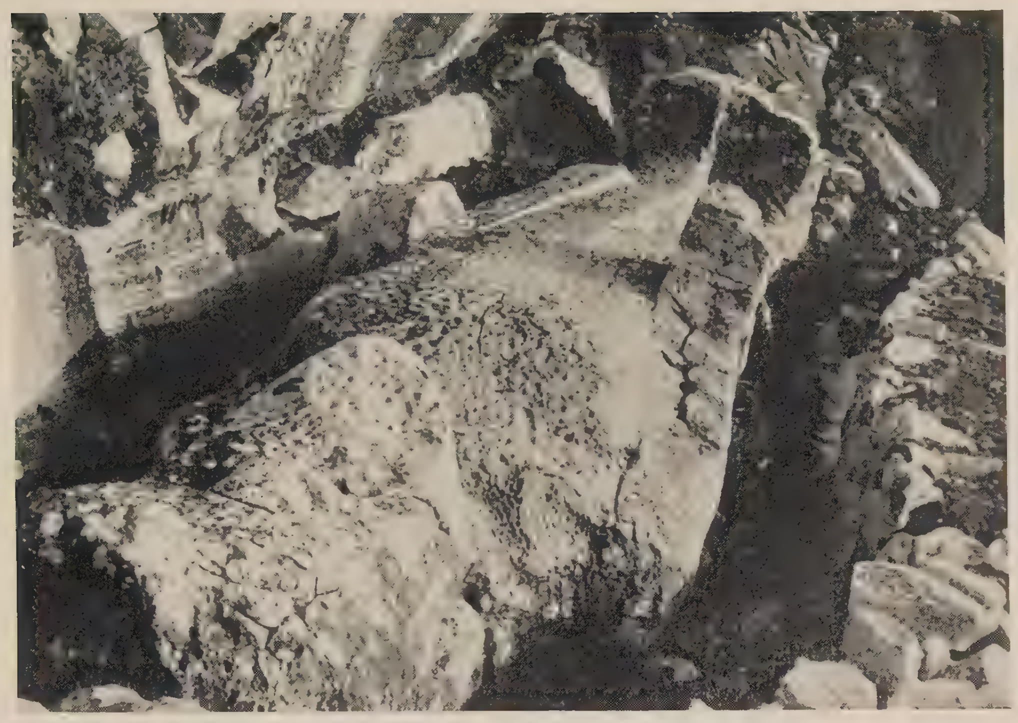


a.

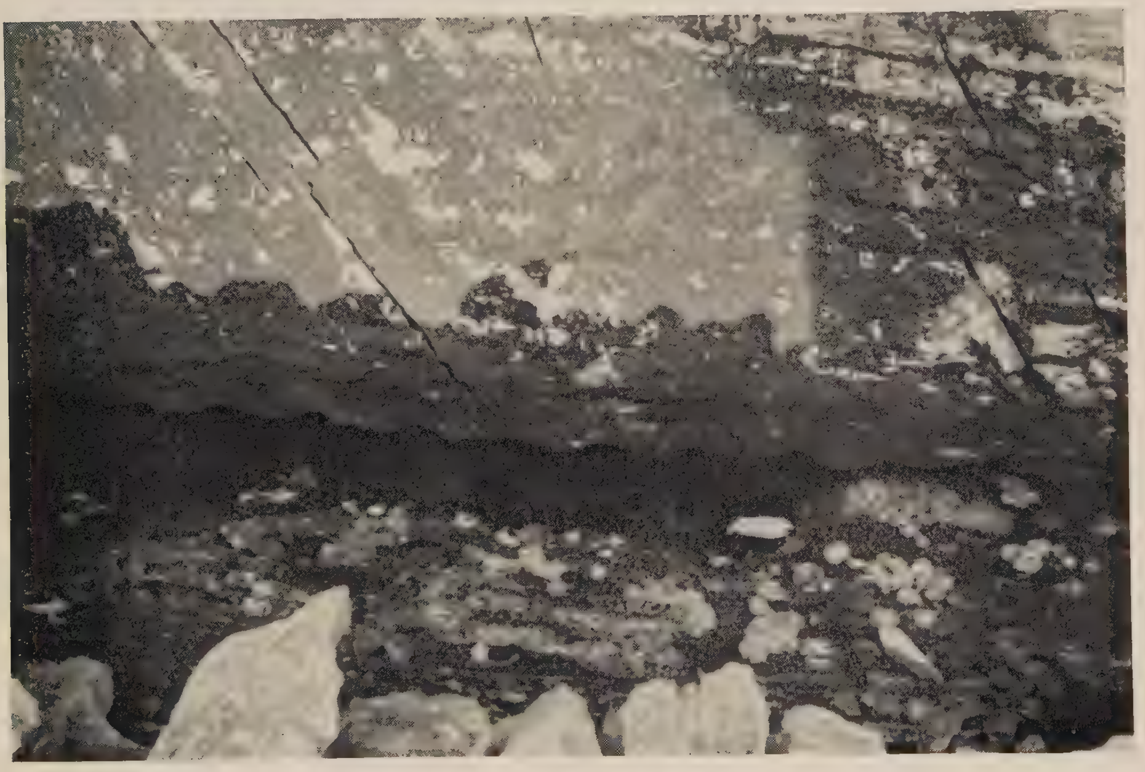
b.

a. Side of the Trench in the Marble.

b. Worked Surface of the Side of the Trench.



a.

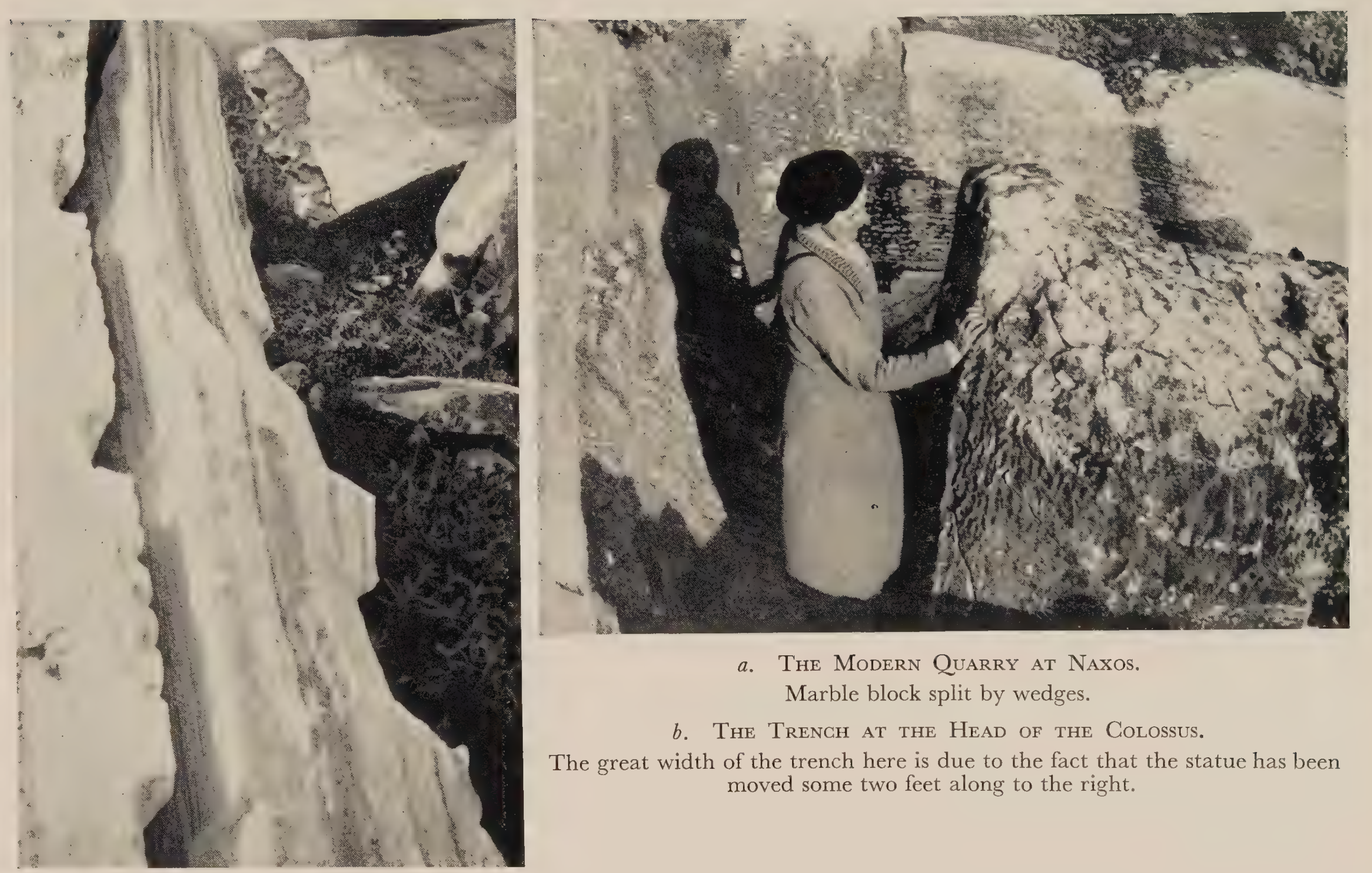


b.

a. The Colossus and its Trench.

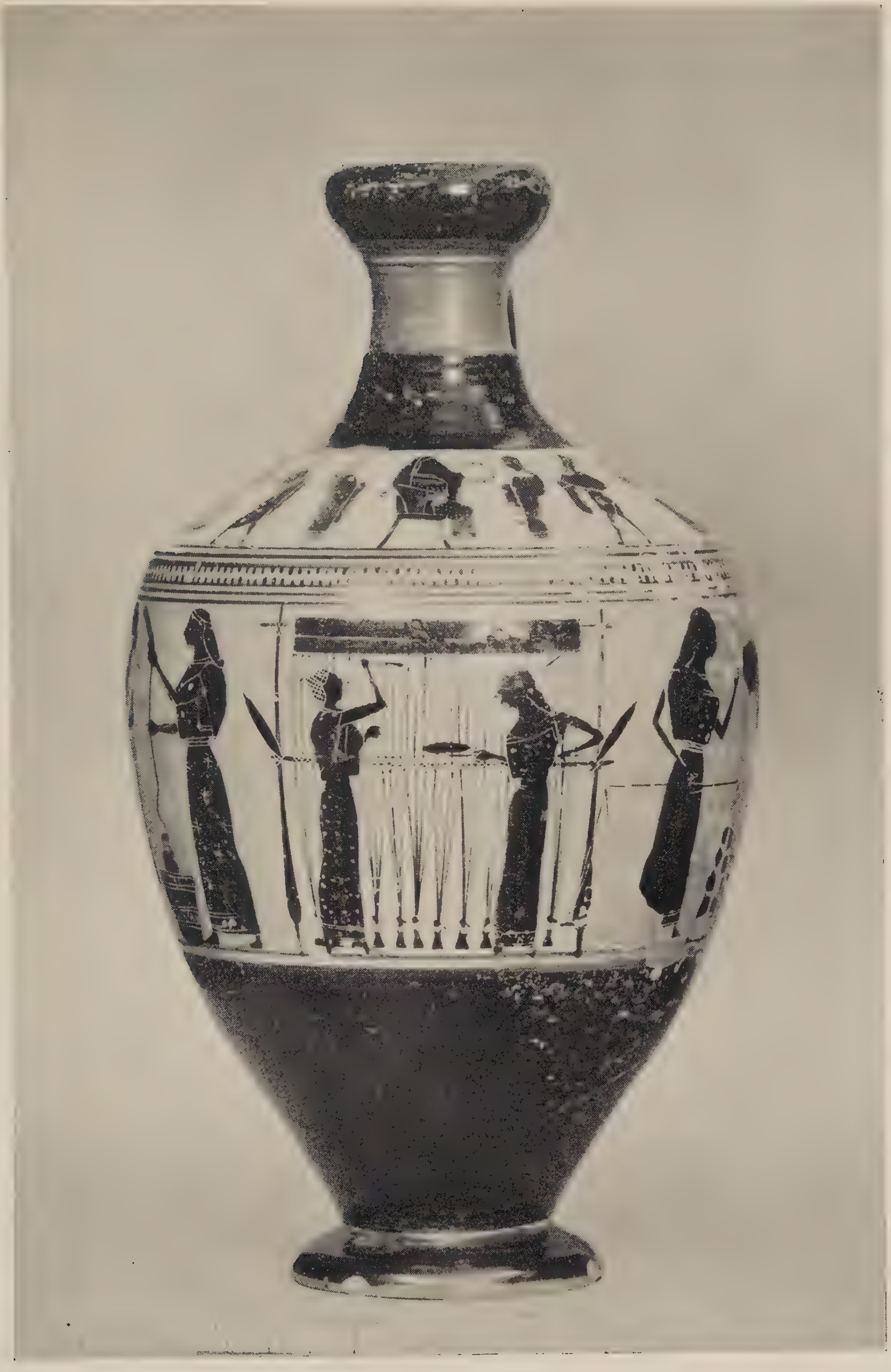
b. Wedge-holes at the Base of the Colossus.

PLATE 5.

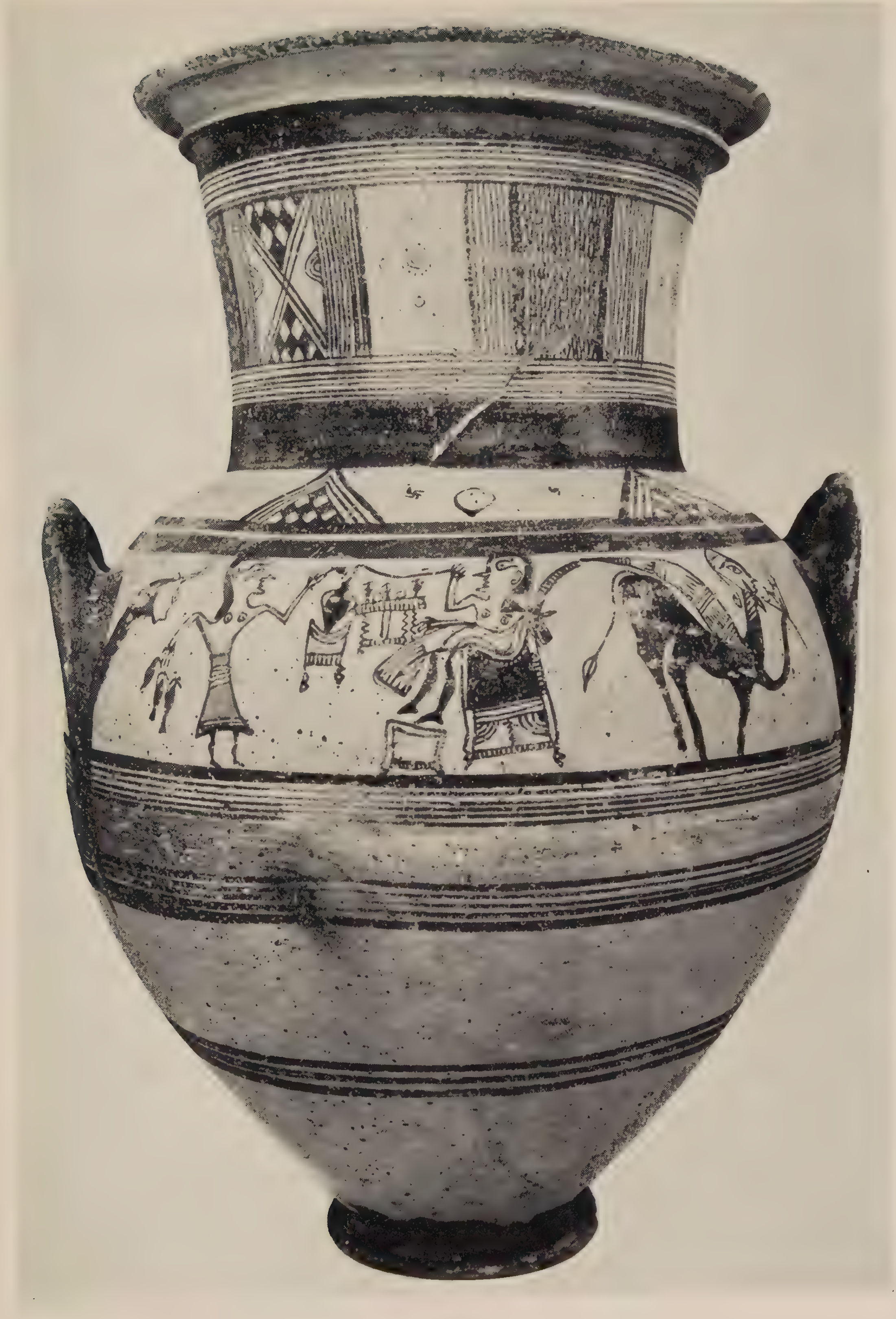


a. The Modern Quarry at Naxos.
Marble block split by wedges.

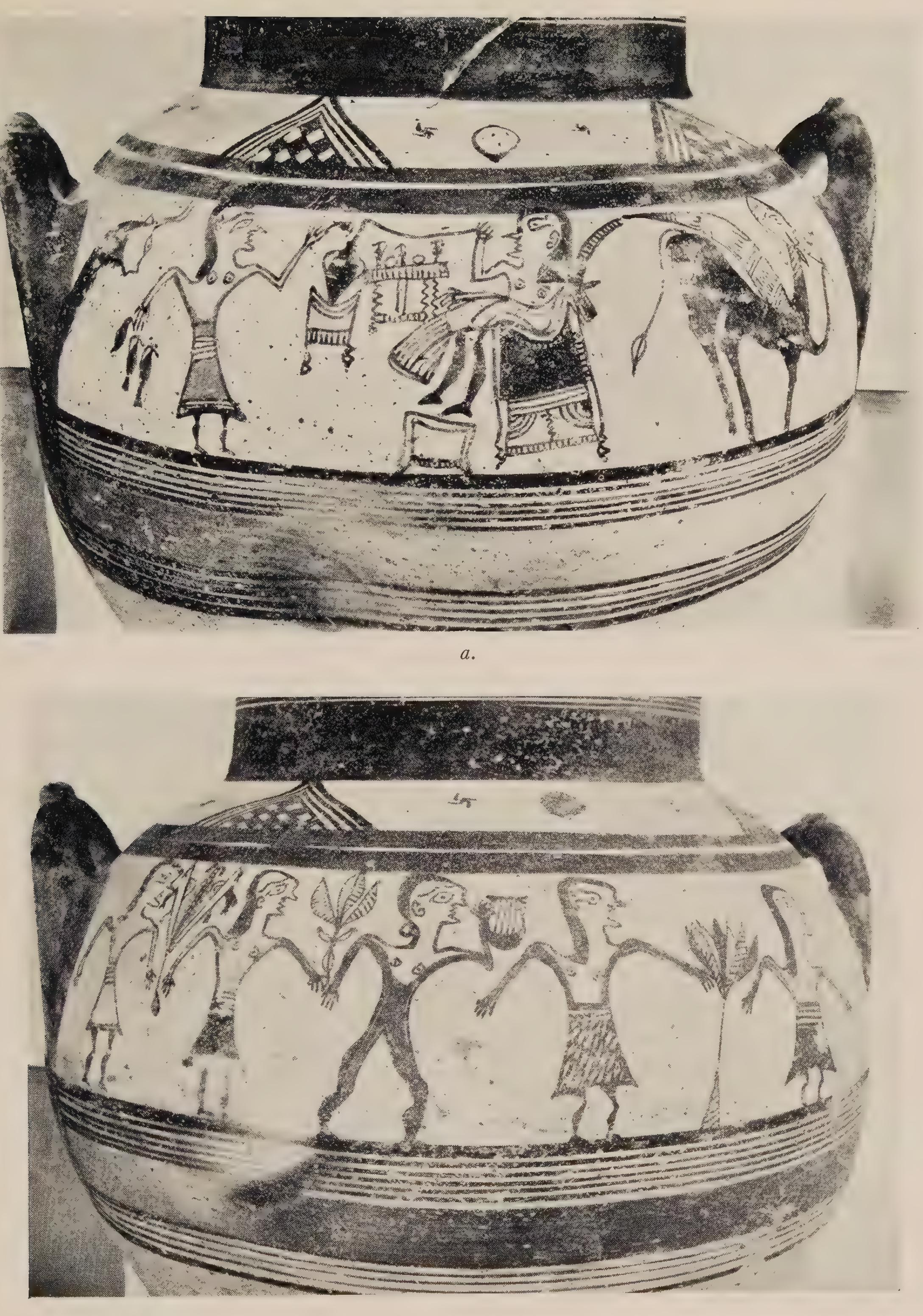
b. The Trench at the Head of the Colossus.
The great width of the trench here is due to the fact that the statue has been moved some two feet along to the right.



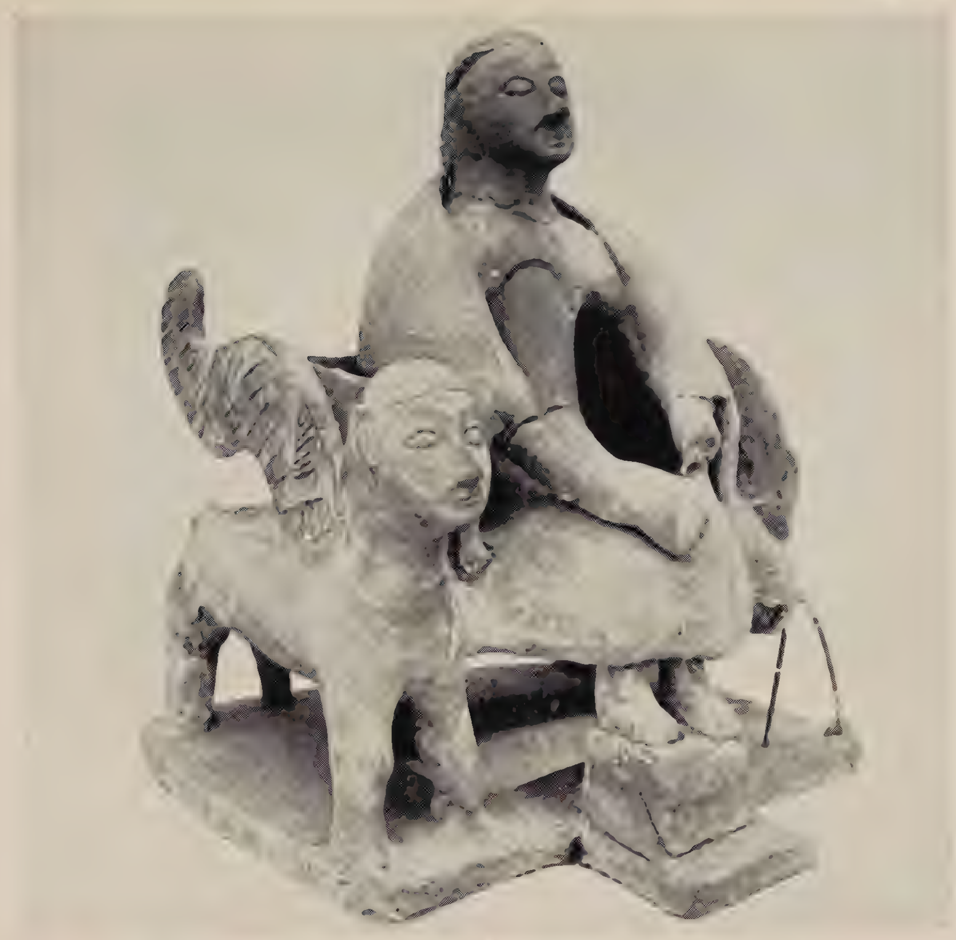
Lekythos with Warp-weighted Loom.
(Mid-sixth century.)
(By courtesy of the Metropolitan Museum, New York.)



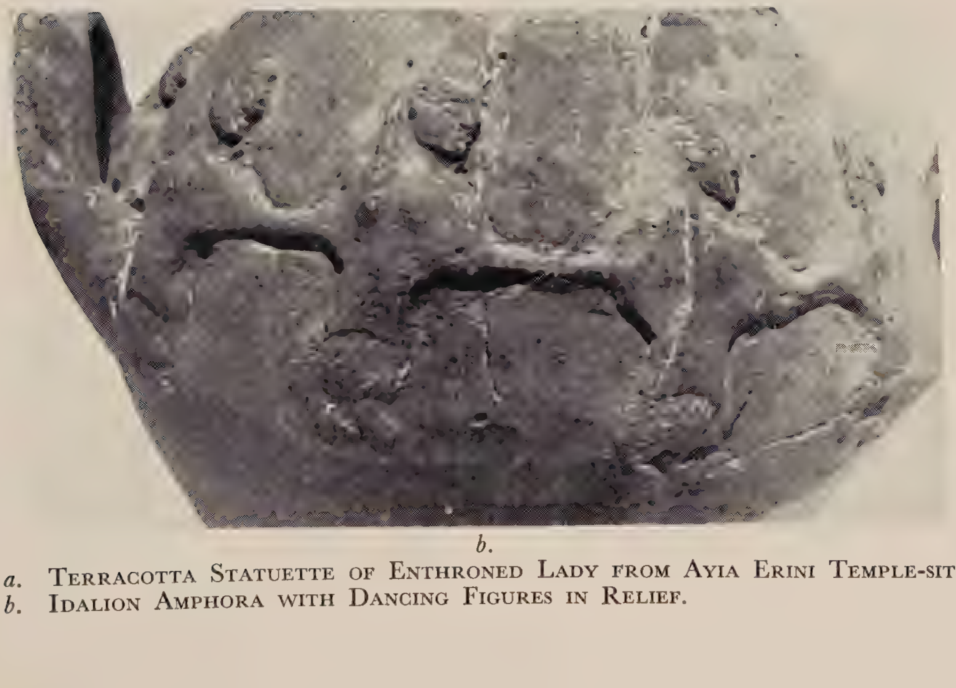
THE HUBBARD AMPHORA.



a. The Front Panel of the Hubbard Amphora.
b. The Back Panel of the Hubbard Amphora.

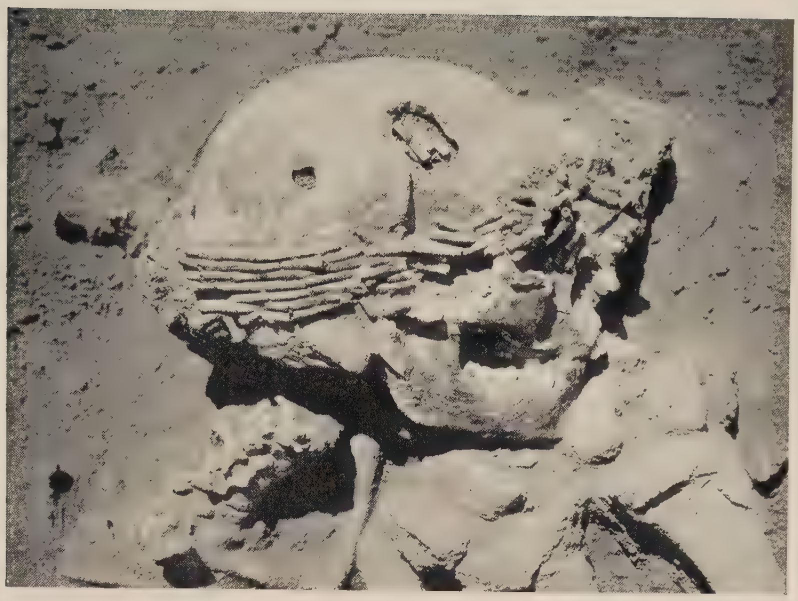


a.

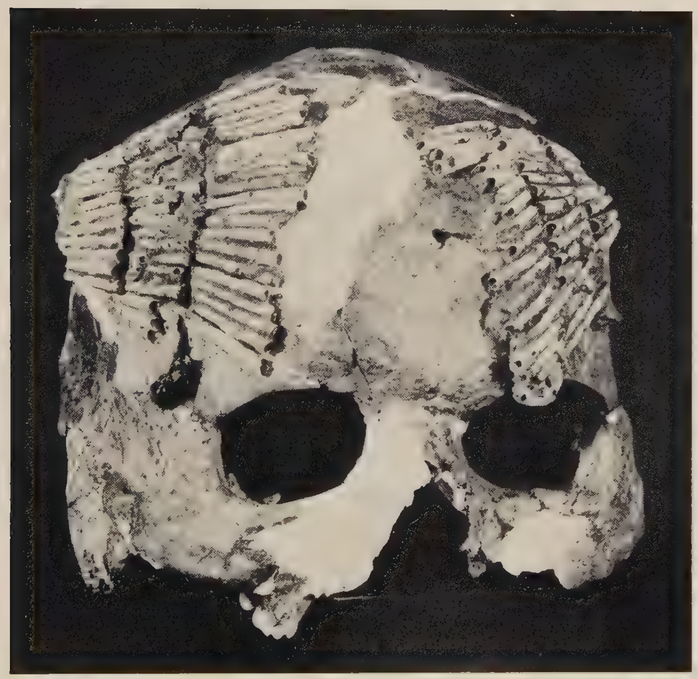


b.

a. Terracotta Statuette of Enthroned Lady from Ayia Erini Temple-site.
b. Idalion Amphora with Dancing Figures in Relief.

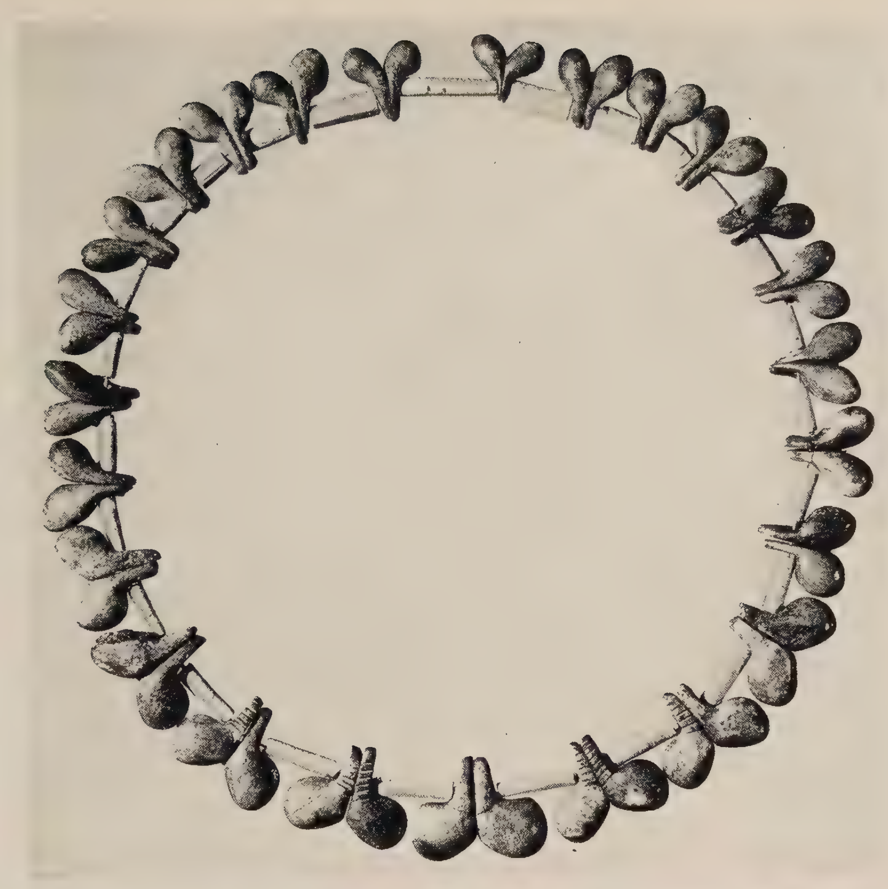


a.

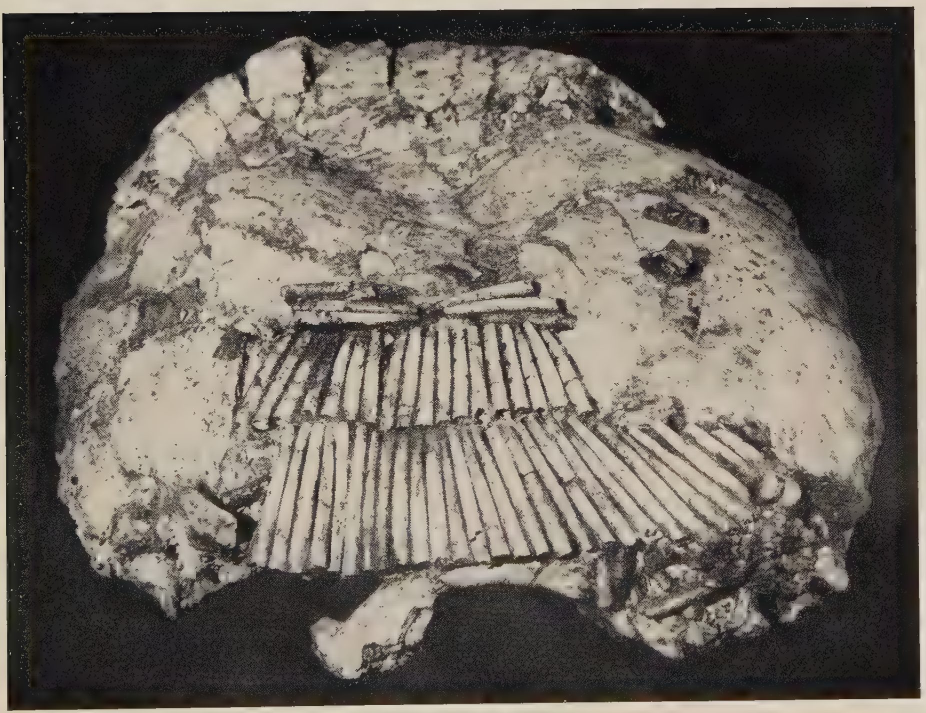


b.

a. Homo 25. The Skull *in situ*.
b. Homo 23. The Skull after Cleaning and Reconstruction.

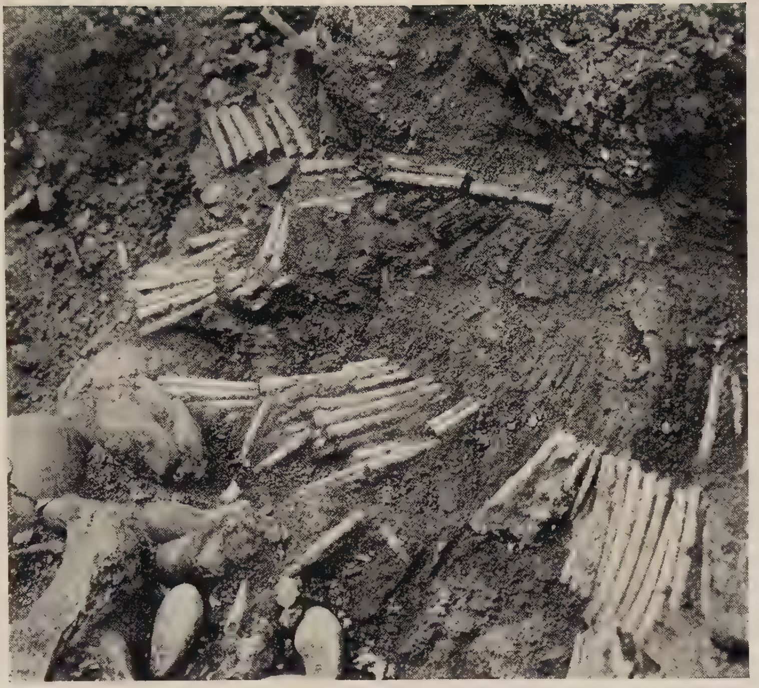


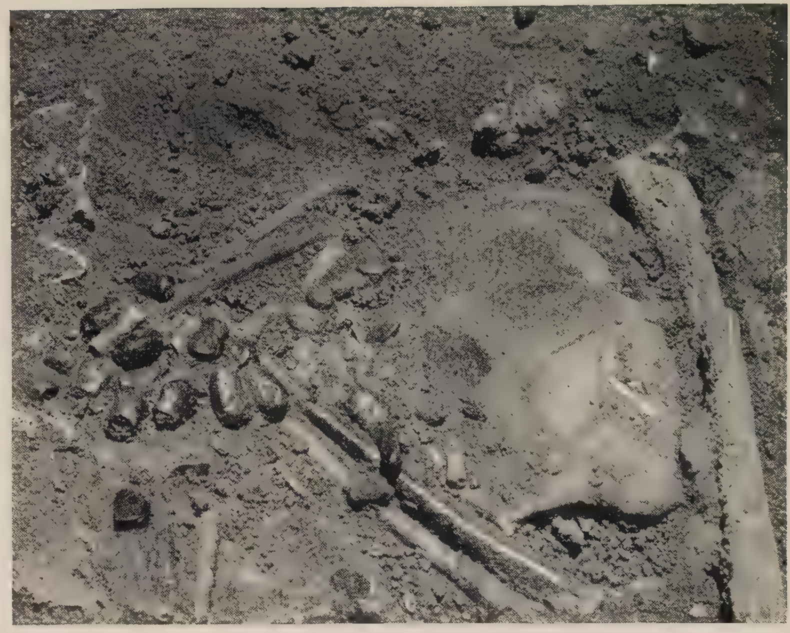
Reconstruction of the Necklace found with H.23.

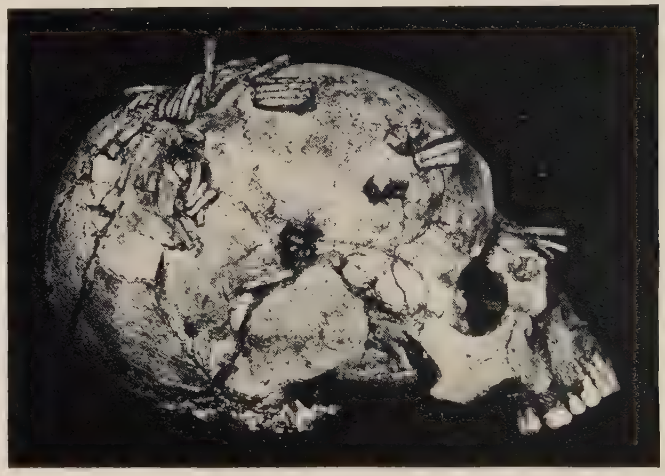


Homo 57. The Skull after Cleaning.

PLATE 12.

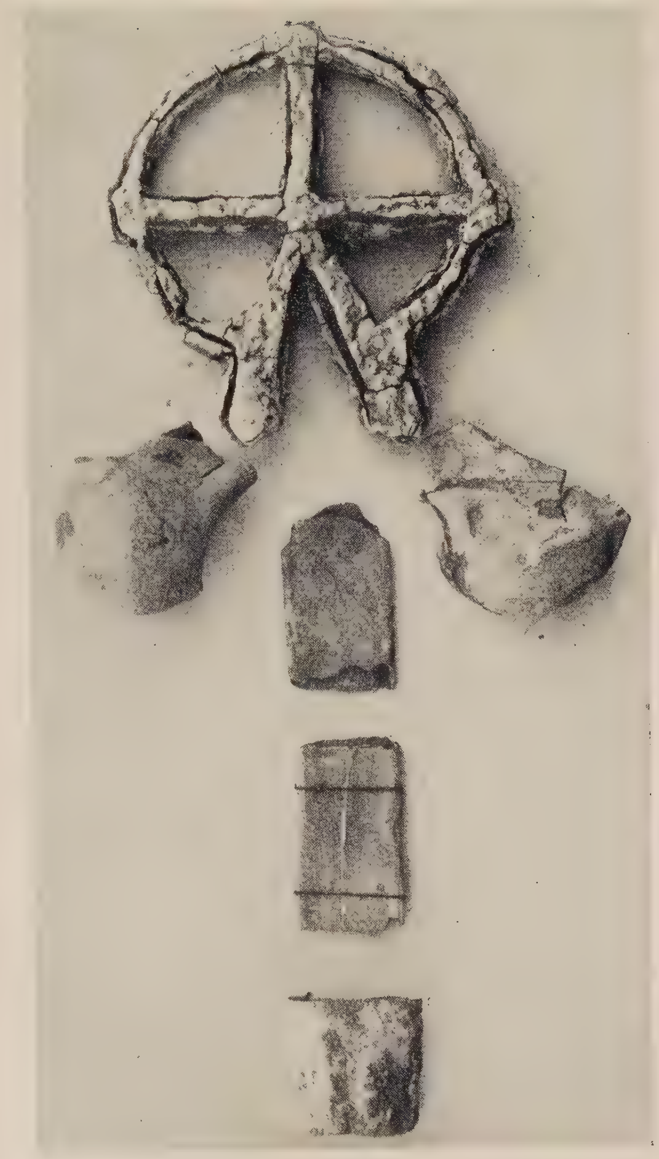




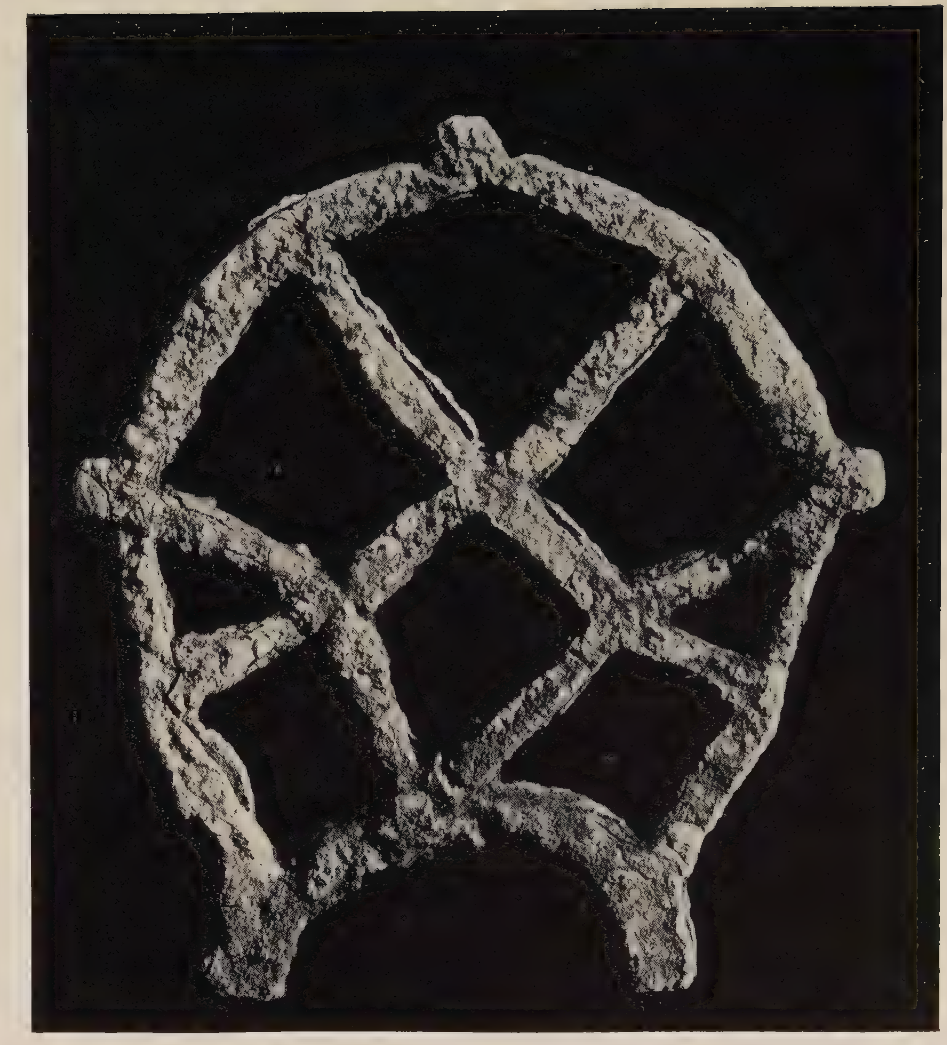


a. Homo 57. Remains of the Head-dress and Necklace on the Ground after the Skull had been Lifted.
b. The Child's Skull in H. Group 28.
c. Homo 41. The Skull after Cleaning.

PLATE 13.

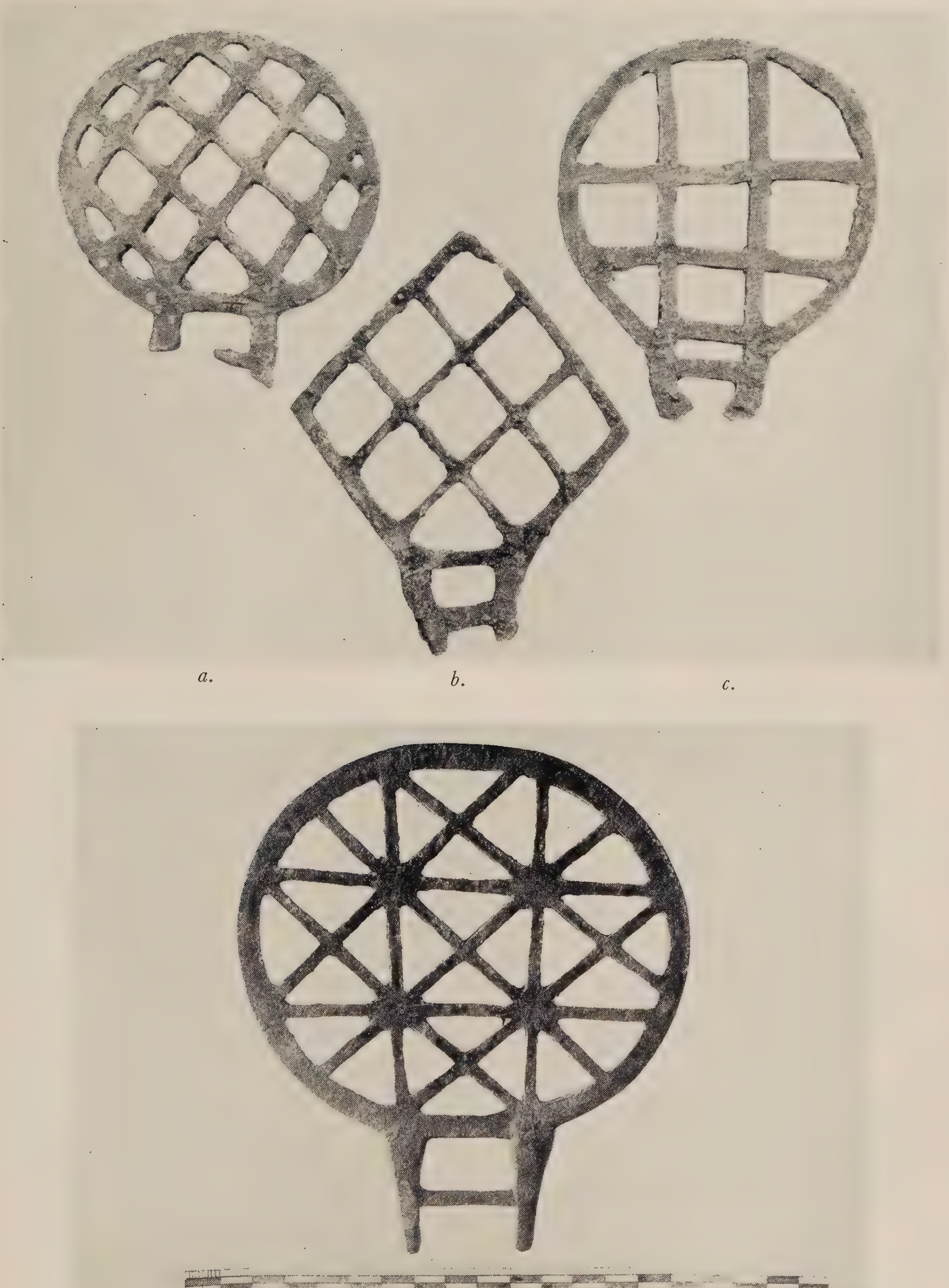


a.



b.

Disques Solaires. *a.* C. 32. Découvert dans les Couches les Plus Basses, à 8 Mètres de Profondeur. *b.* C. 21.

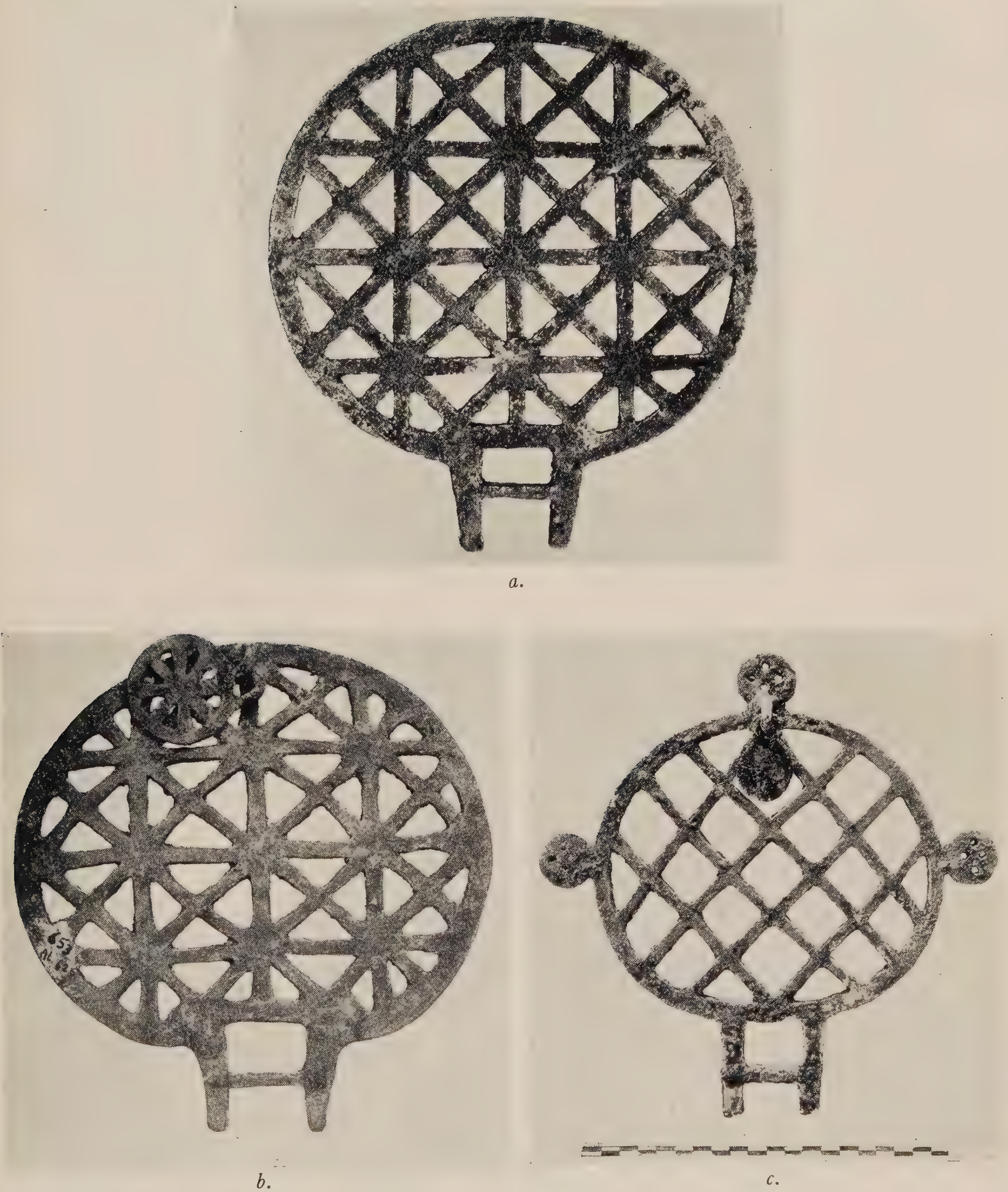


a. *b.* *c.*

d.

Disques Solaires. *a.* B. 1070. *b.* B. 1071. *c.* B. 1072. *d.* D. 6.

PLATE 15.



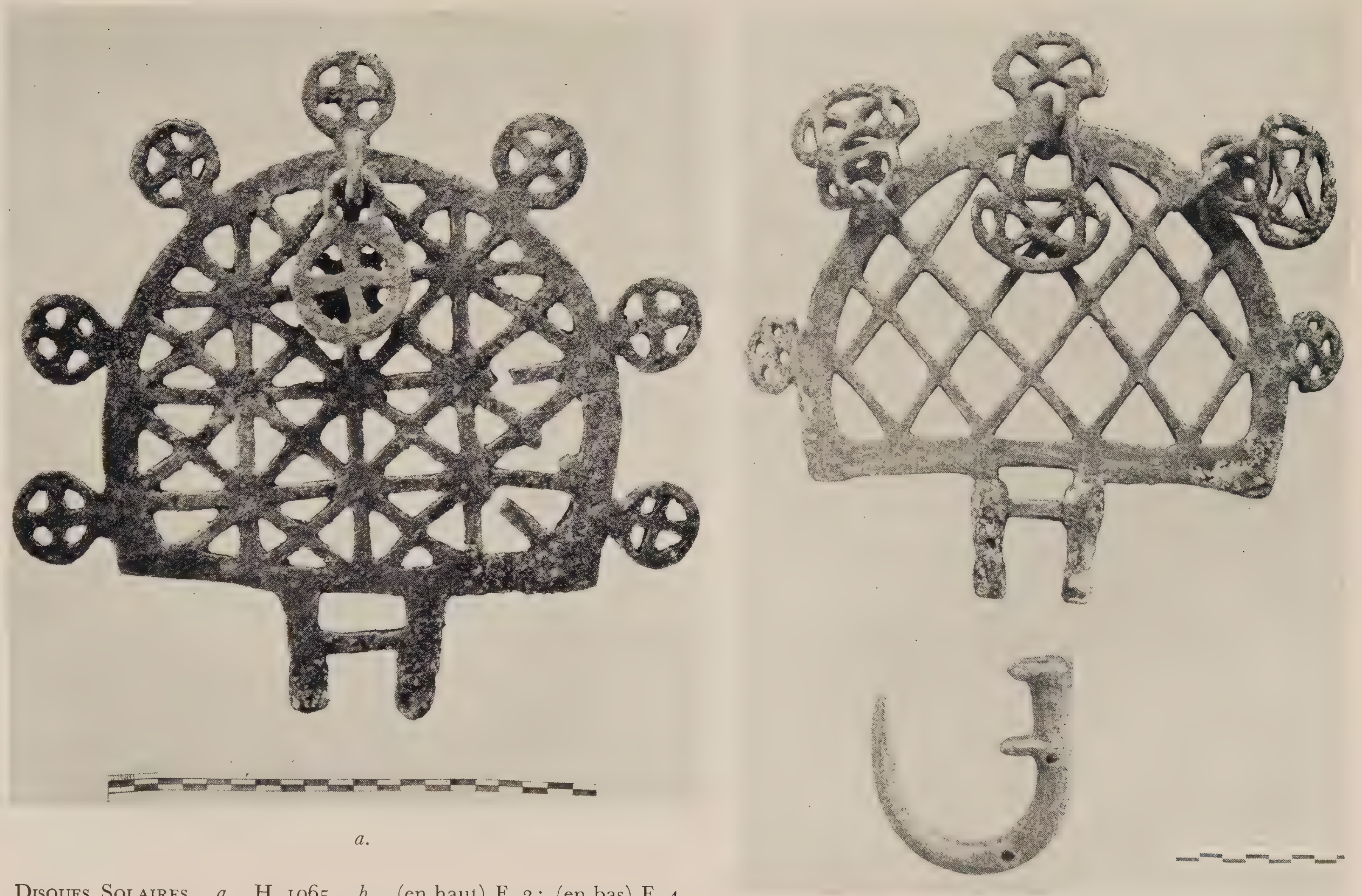
a.

b.

c.

Disques Solaires. *a.* B. 652. *b.* B. 653. *c.* D. 5.

PLATE 16.

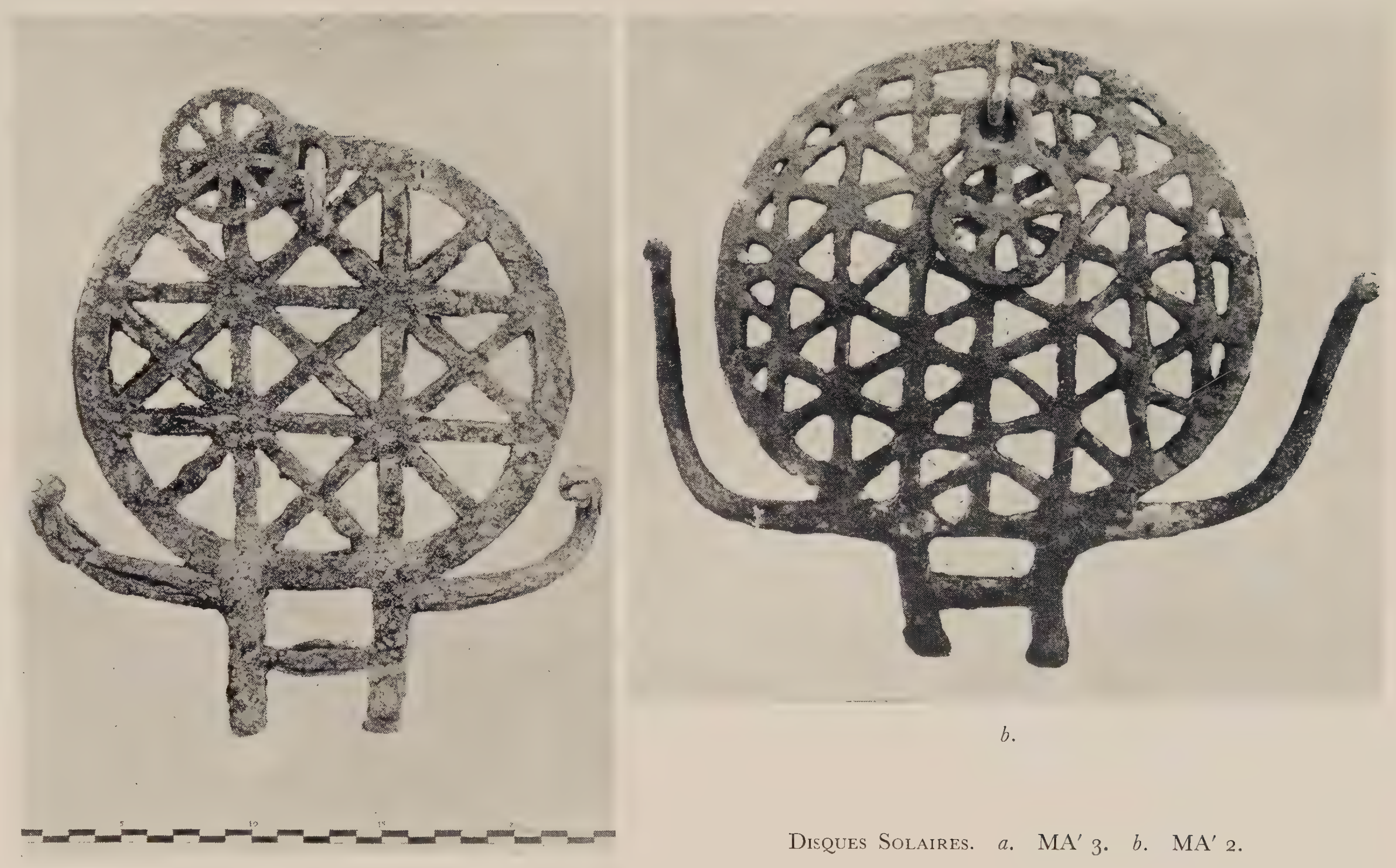


a.

b.

Disques Solaires. *a.* H. 1065. *b.* (en haut) E. 3; (en bas) E. 4.

PLATE 17.

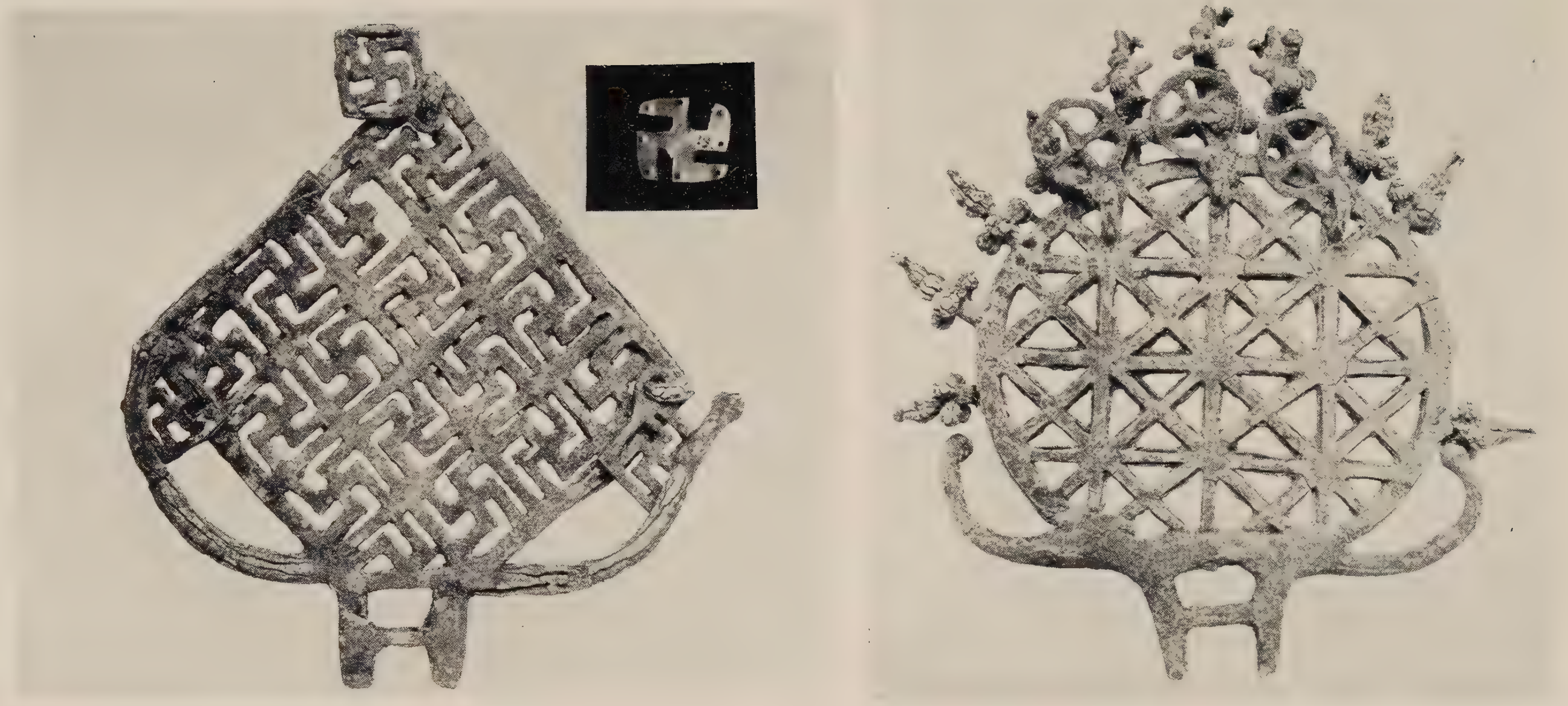


a.

b.

Disques Solaires. *a.* MA′ 3. *b.* MA′ 2.

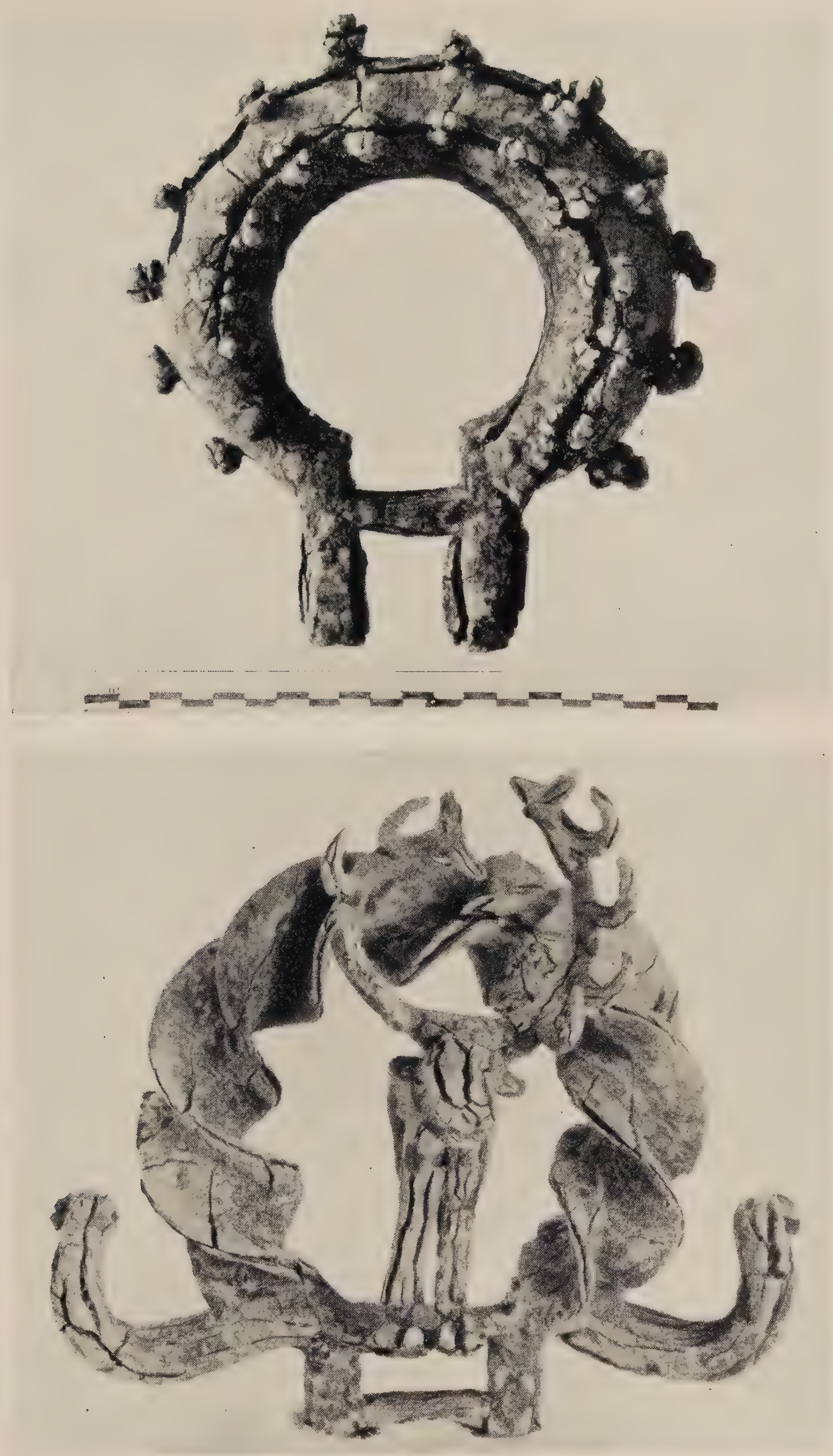
PLATE 18.



a. *b.*

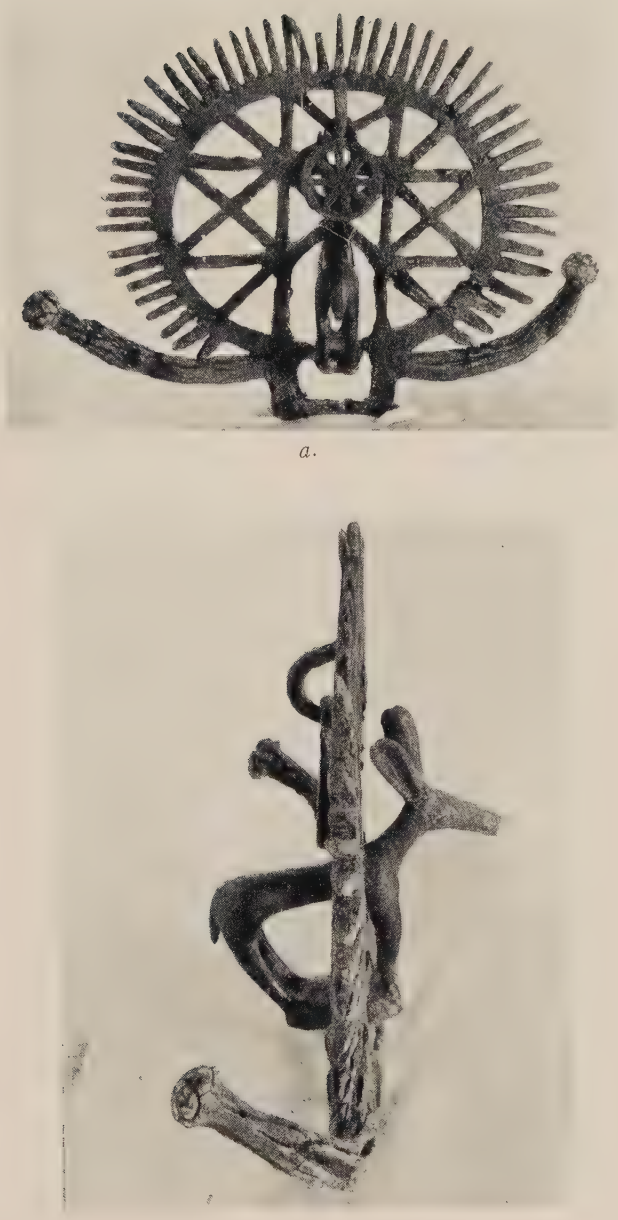
Disques Solaires. *a.* B. 655 et Croix Gammée en or, Tombe H. *b.* B. 654.

PLATE 19.



Disques Solaires. *a.* B. 1071. *b.* D. 2.

PLATE 20.

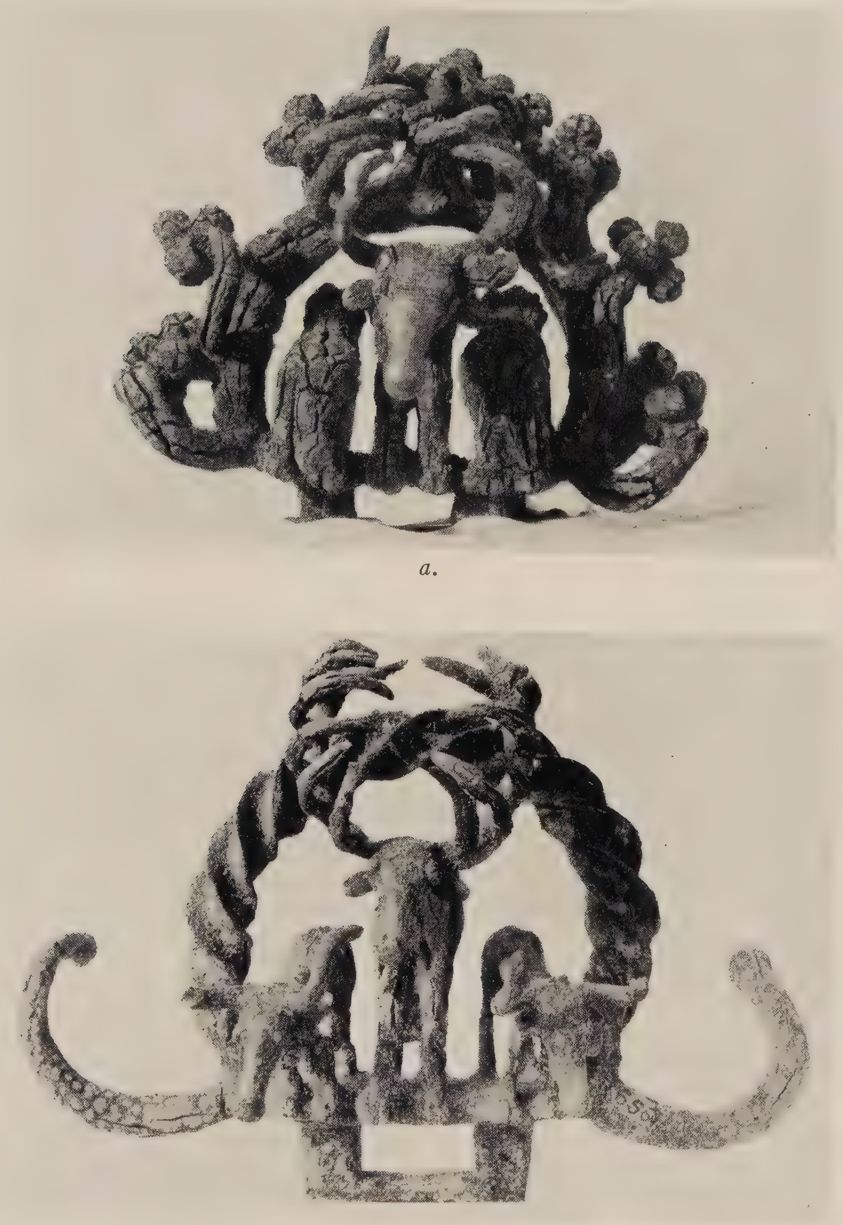


a.

b.

Disques Solaires. *a* et *b*. D. 1. Vue de face et vue latérale.

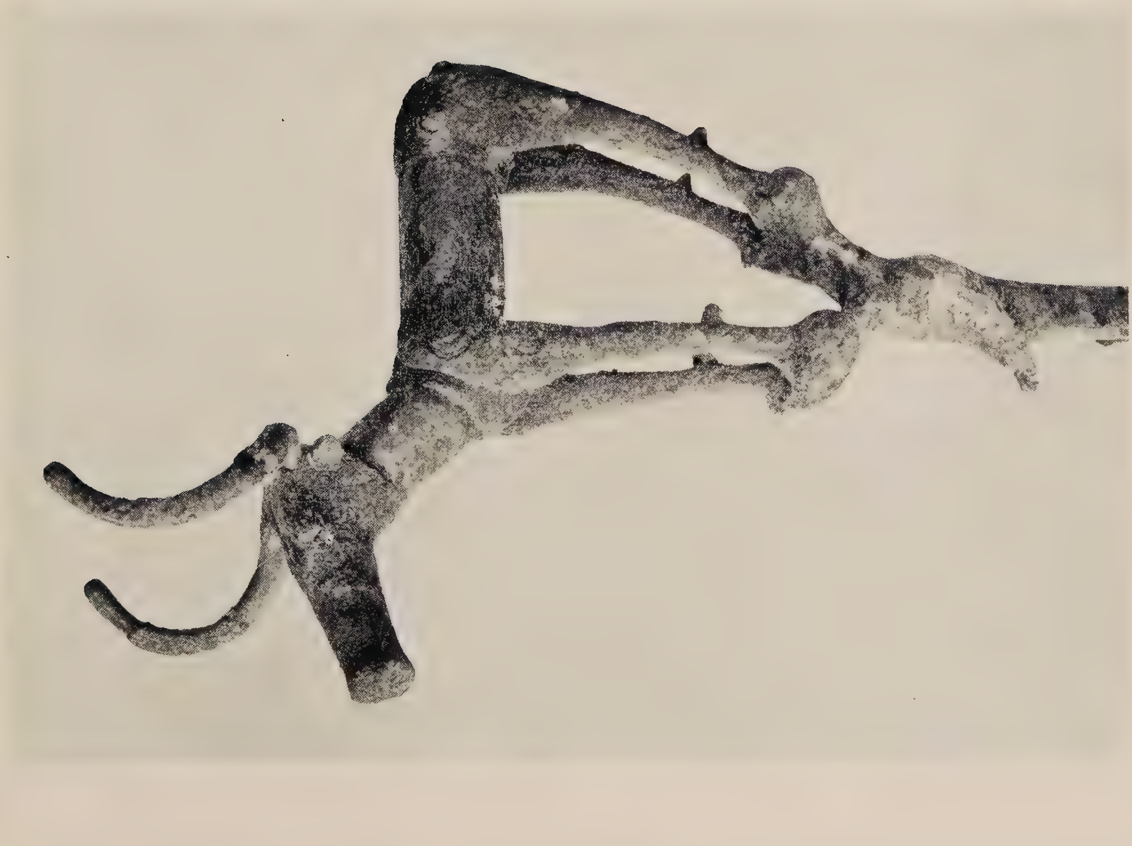
PLATE 21.



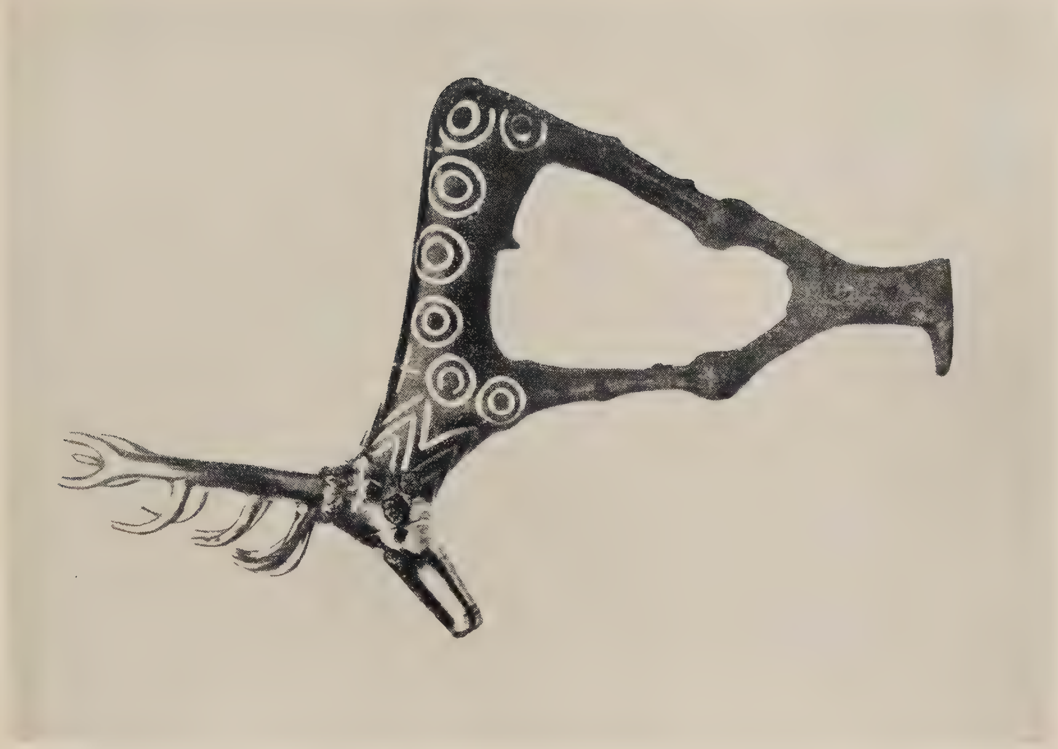
a.

b.

Disques Solaires. *a.* B. 657. *b.* B. 656.



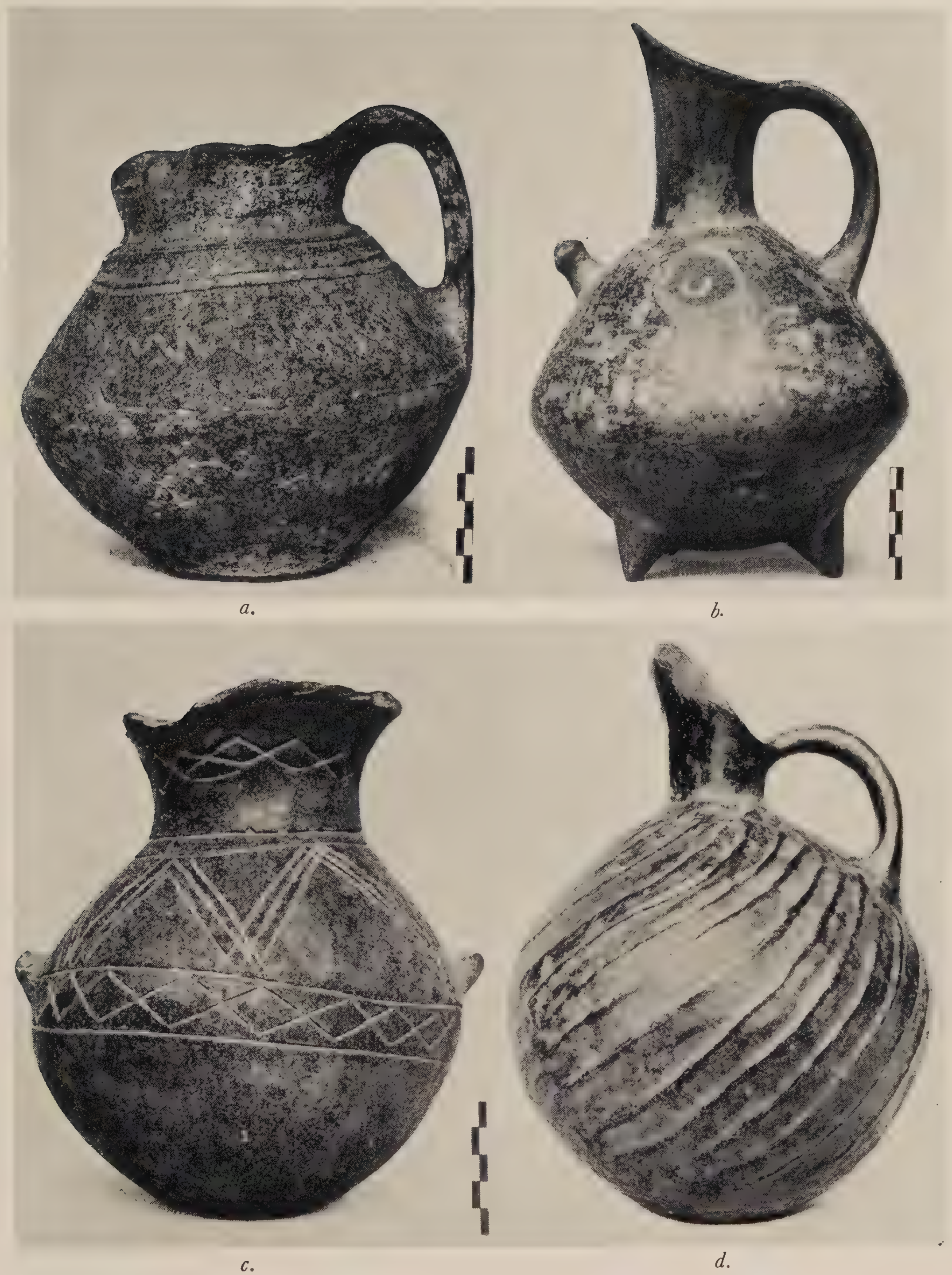
a.



b.

a. H. 93. *b.* B. 658.

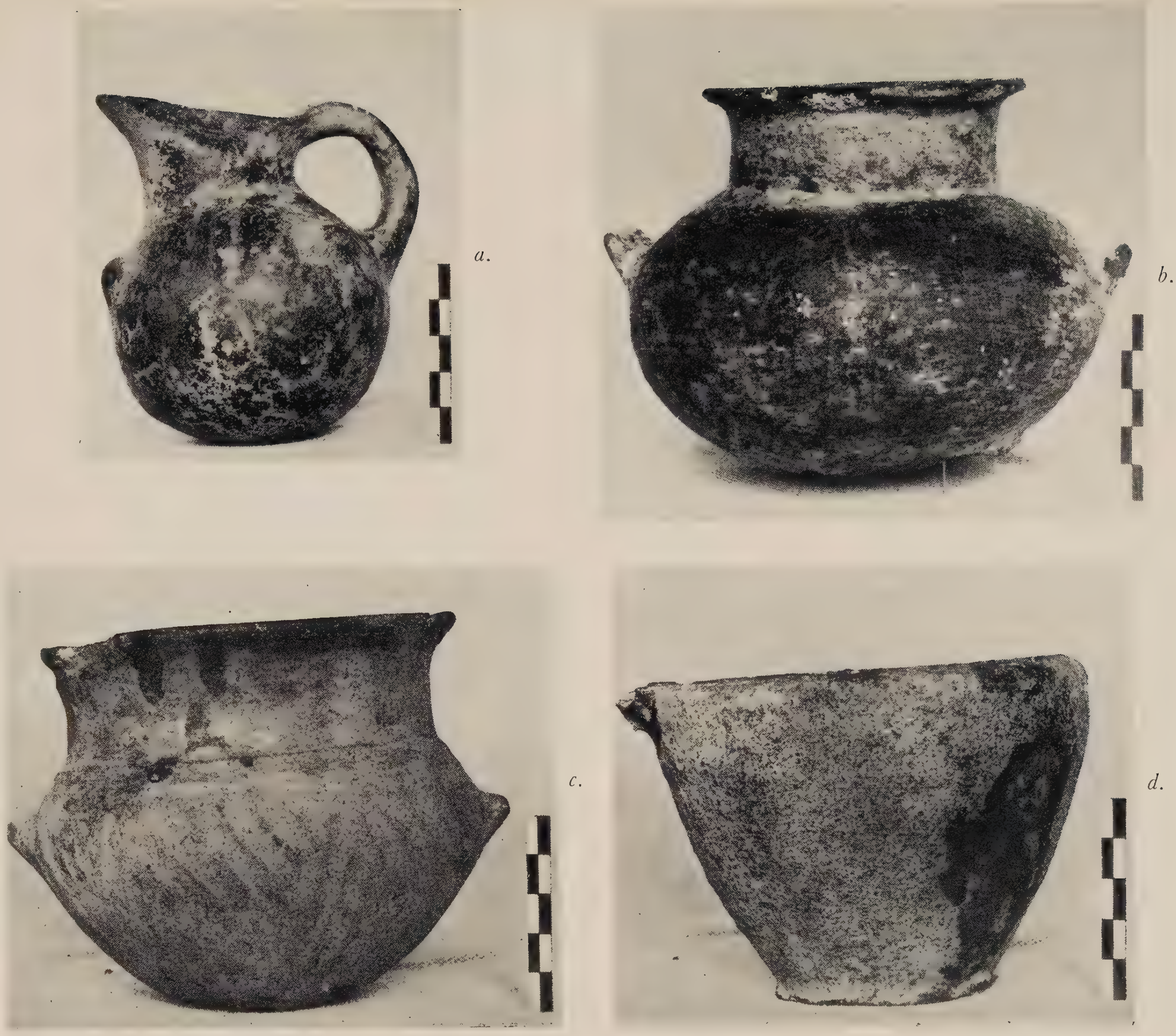
PLATE 23.



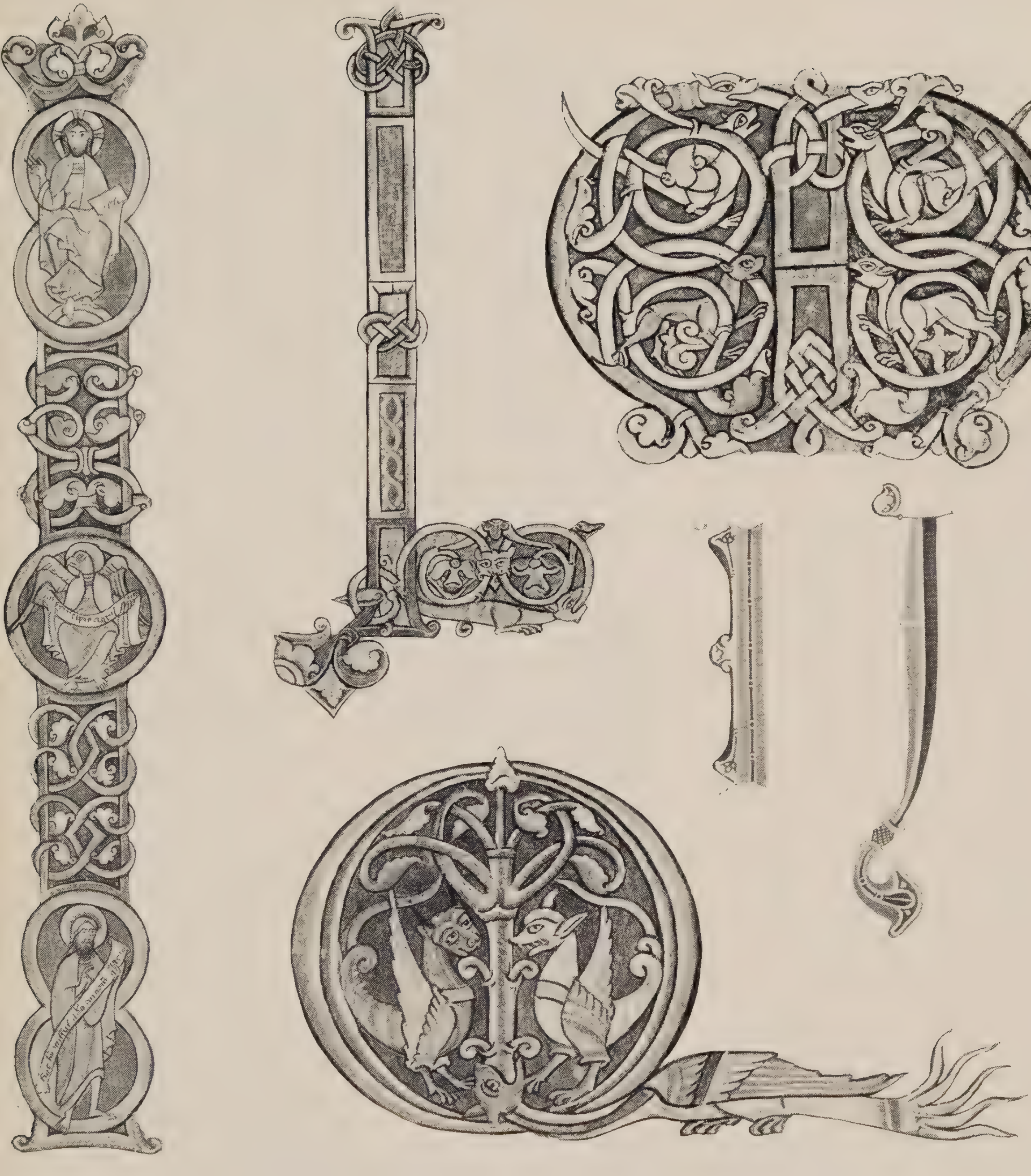
a. *b.* *c.* *d.*

Anatolian Vases at Cambridge.

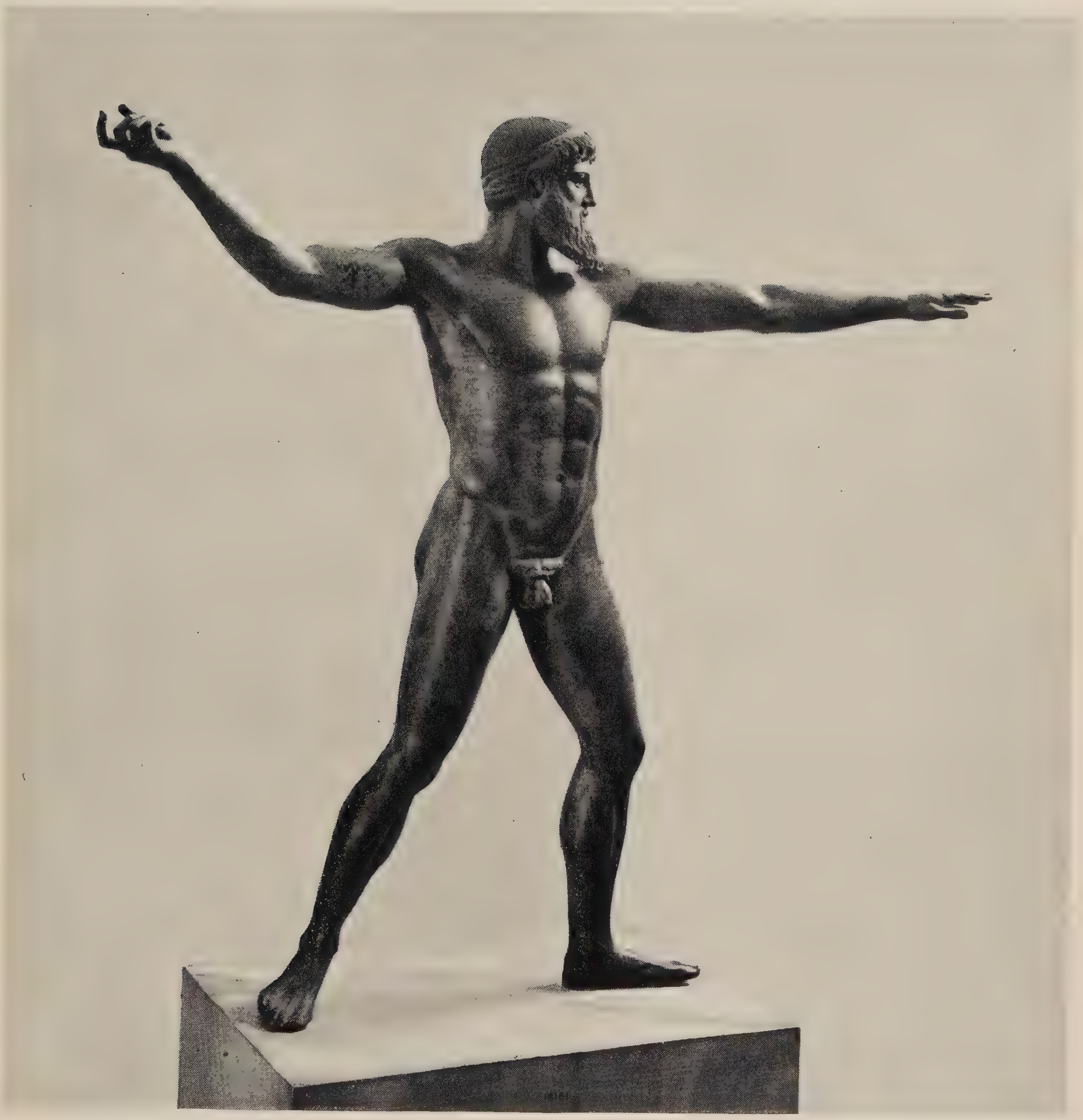
PLATE 24.



ANATOLIAN VASES AT CAMBRIDGE.

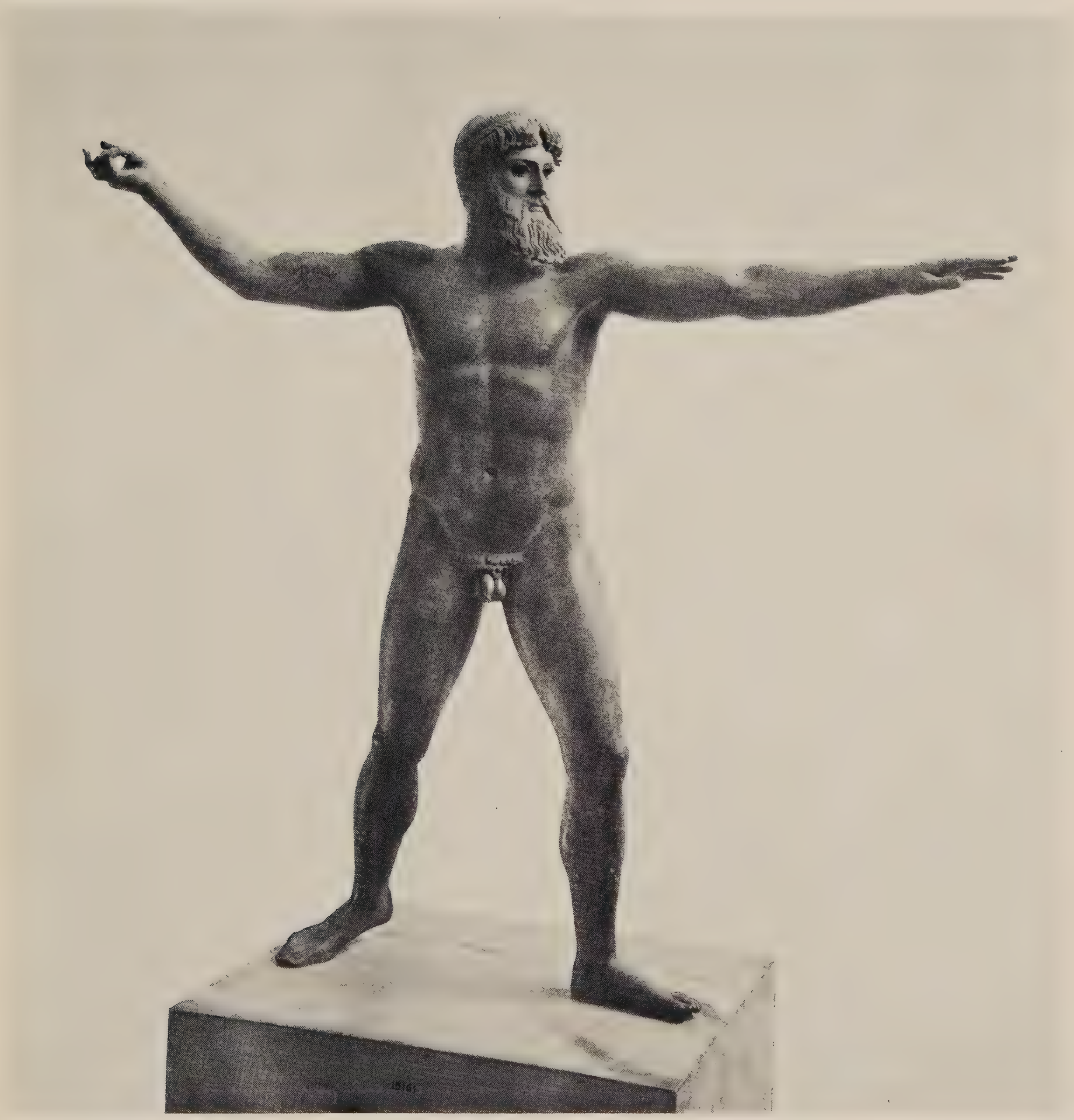


BURY SAINT EDMUND'S GOSPELS, XII$^{\text{TH}}$ CENTURY.
Cambridge, Pembroke College, MS.120. I, L, I, J, $\frac{2}{3}$; M, Q. $\frac{1}{1}$.

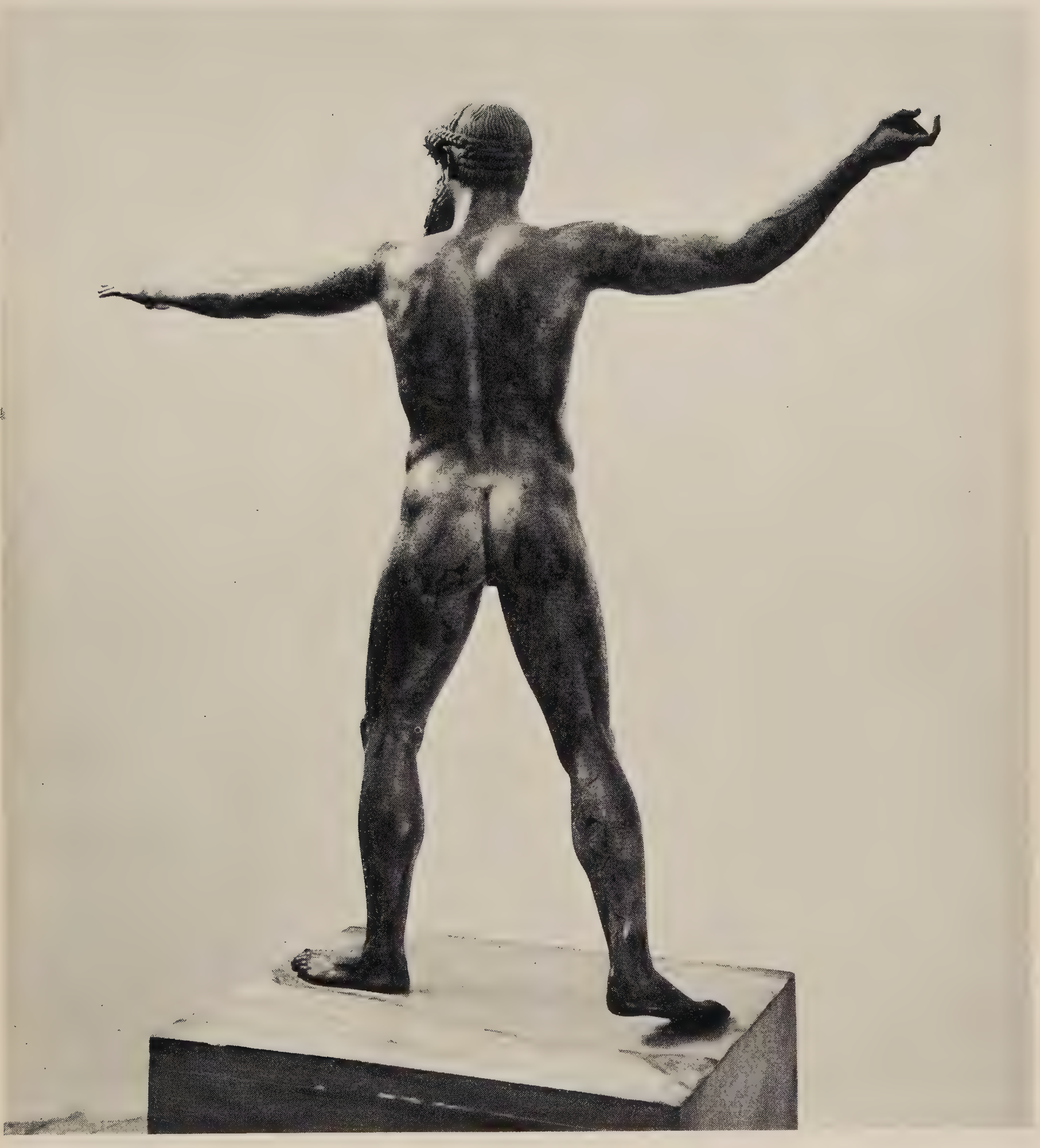


Bronze Zeus from Artemisium.

PLATE 27.



Bronze Zeus from Artemisium



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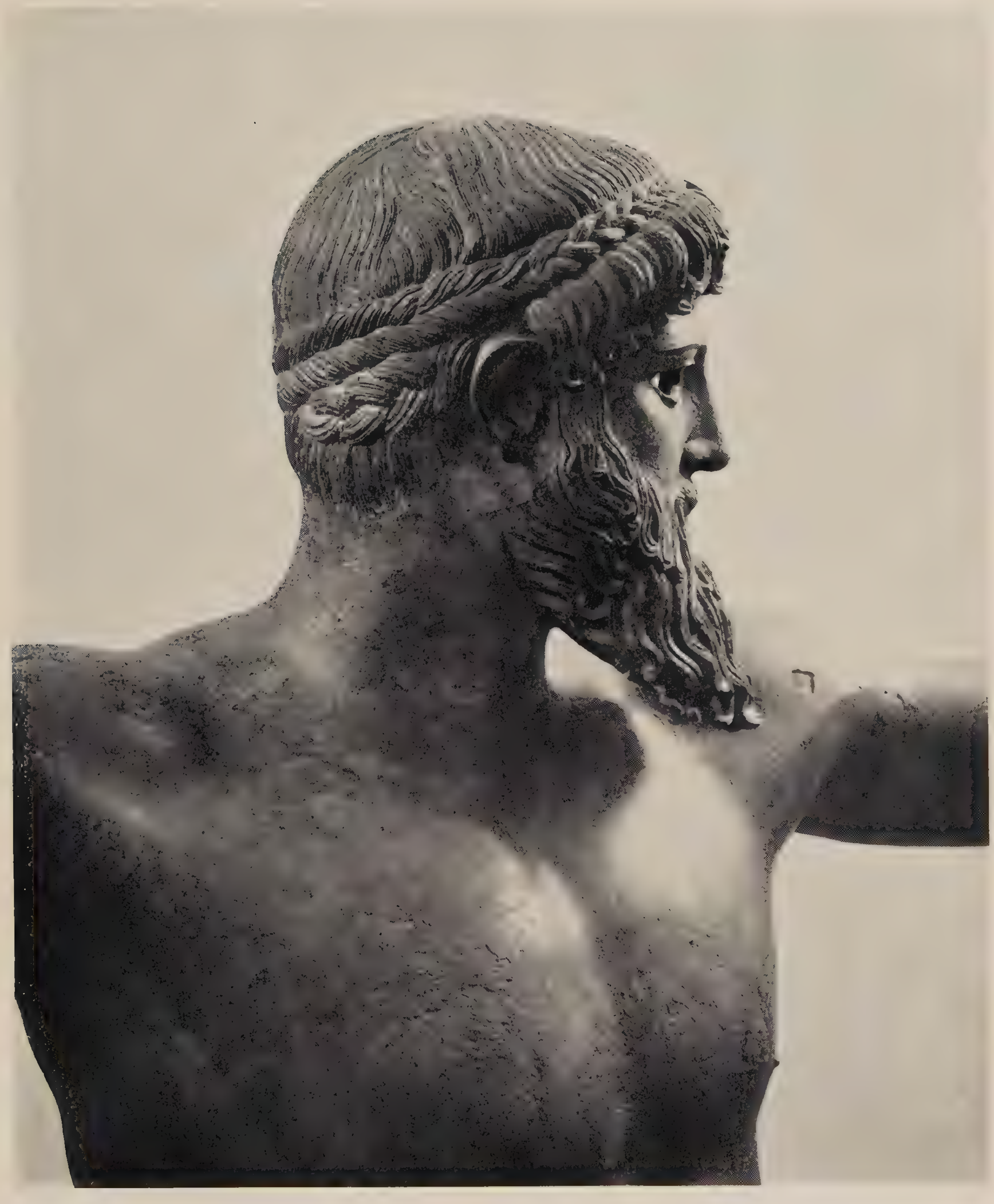

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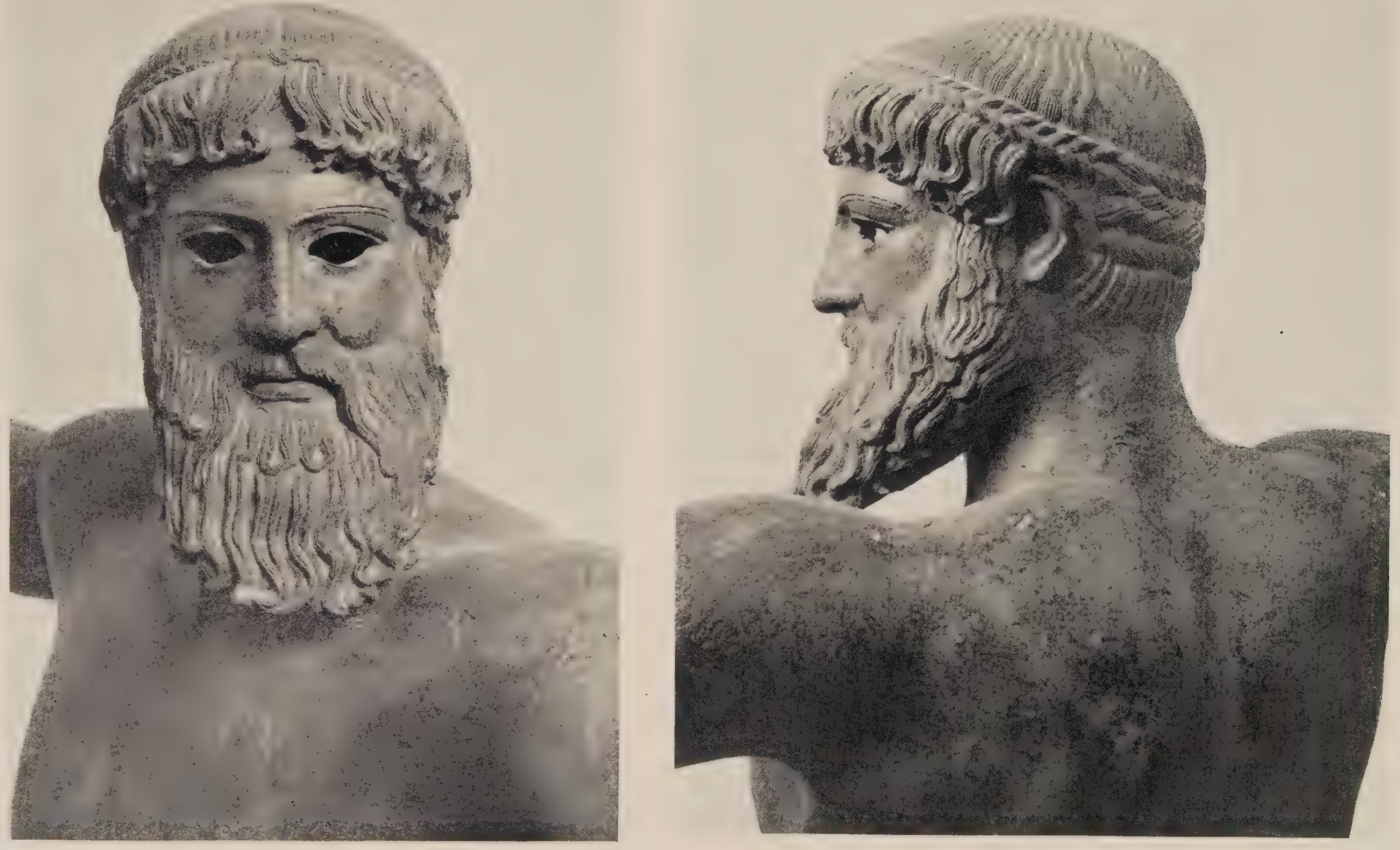

Bronze Zeus from Artemisium.

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